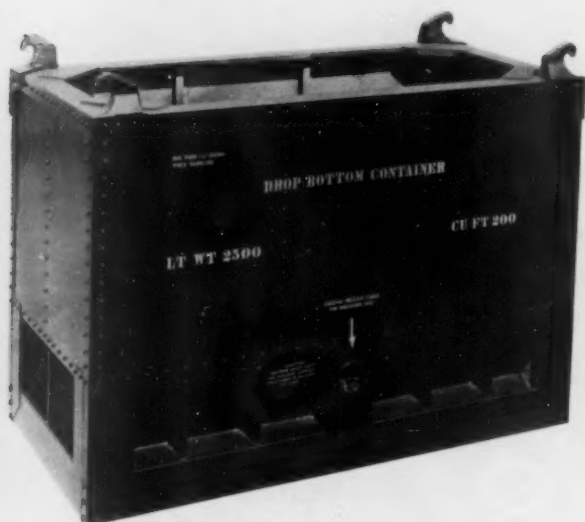


RAILWAY AGE

THE INDUSTRY'S WEEKLY NEWSMAGAZINE

Another YOUNGSTOWN *Innovation* **DROP BOTTOM COKE CONTAINERS—DESIGNED TO SECURE TO THE RAILROADS THE SHIPMENT OF COKE**

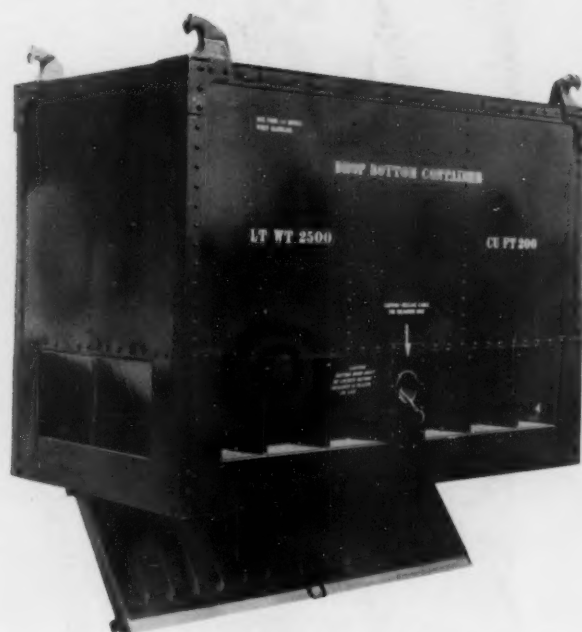


COKE CONTAINER - DOOR CLOSED

These containers afford the consignee the easiest, fastest and most efficient and economical manner of handling coke. They preserve intact the lumps of coke loaded into them, thereby greatly minimizing the quantity of fines normally produced by other methods of coke handling.

In operation the containers are lifted from the cars in which they are transported, their load quickly and easily discharged at the point of use or into bins, and then they are immediately returned to the cars. The flexibility of coke handling which these containers achieve eliminates intermediate handling and realizes a substantial savings of time and money for the consignee.

The Youngstown coke container has a large cubical capacity,



COKE CONTAINER - DOOR OPEN

up to 325 cu. ft. and a large load capacity, up to 11,375 pounds. The container is 9' long by 4'6" wide, and when placed cross-wise of the car eleven containers can be accommodated in a 52' 6" gondola car.

The substantial reduction in cost realized by the consignee through handling coke in Youngstown containers will augment shipment of coke via the railroads. This increased traffic will soon pay for the cost of the containers. Youngstown drop bottom containers are self-liquidating.

YOUNGSTOWN STEEL DOOR COMPANY

Camel Sales Company
 Cleveland Chicago

Camel Company Limited
 New York Youngstown



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Texaco Airtac — a special gel-type oil has remarkable stability, water separation and antifoam characteristics under application temperatures. It does not creep or drip in service even at tempera-

tures as high as 185° F. *Texaco Airtac* is easy to apply, easy to remove, economical.

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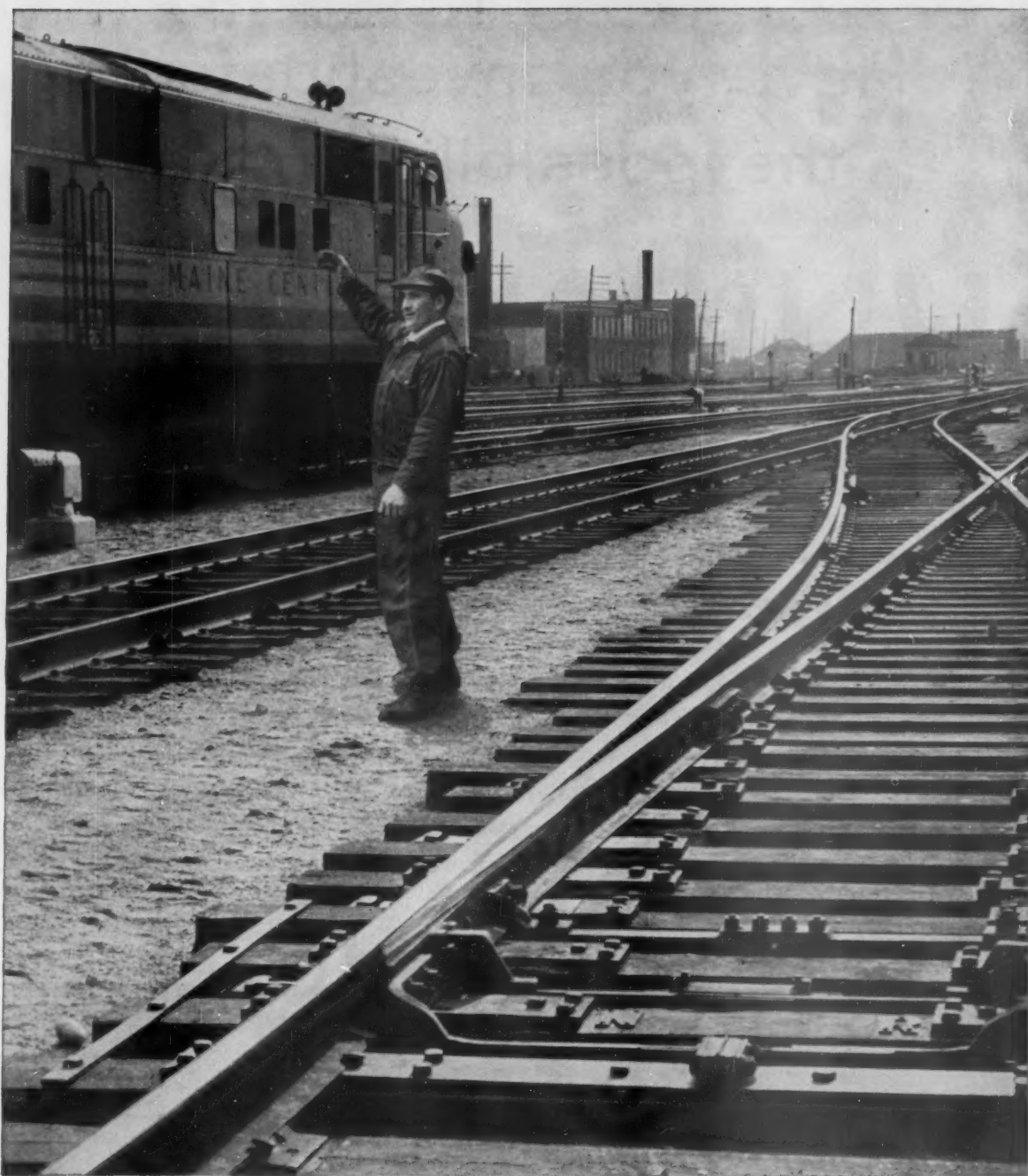
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The Texas Company, *Railway Sales Division*, 135 East 42nd Street, New York 17, New York.



TEXACO Railroad Lubricants
AND SYSTEMATIC ENGINEERING SERVICE





HEAT-TREATED STOCK RAILS IN NEW ENGLAND—The Bethlehem stock rails for these turnouts were supplied heat-treated. Reason: to retard the tendency of rail-head metal to cold-flow where wheel loads are transferred from switch point to stock rail. This greatly reduces the battering and cutting of rail heads and keeps the stock rails in service longer with less maintenance. Bethlehem can treat rails and switch points up to 60 ft in length, and has nearly a generation of experience in heat-treating techniques. A Bethlehem engineer will be glad to make an appointment to discuss your rail and trackwork problems in detail; you can get in touch with him through the Bethlehem district sales office nearest to you.

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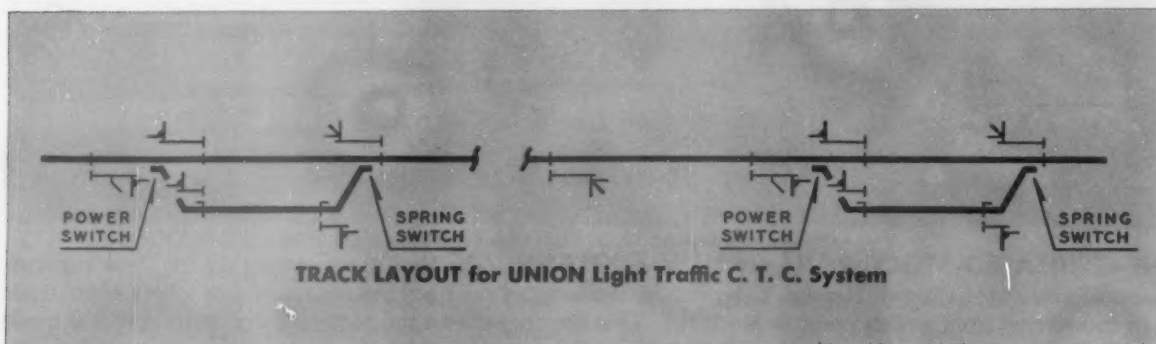
Have you investigated the possibilities of **UNION C.T.C.** for LIGHT TRAFFIC LINES?

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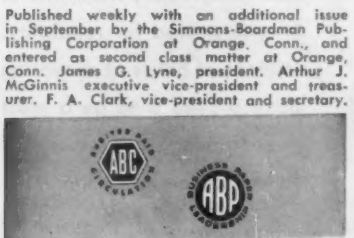
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Workbook of the Railways

Vol. 141, No. 22
November 19, 1956

CONTENTS and Week at a Glance

A rousing comeback in piggyback business . . .

. . . has been made by those roads whose T-O-F-C tonnage suffered setbacks when the spring freight rate hike left them vulnerable to flagged-out or lagging truck rates. . . . p.7

\$1 billion a year in new revenue . . .

. . . can come to railroads through piggyback operations, says Eugene F. Ryan, Rail-Trailer Company president. Joining Mr. Ryan in predicting a brilliant future for T-O-F-C were H. W. Von Willer, Erie president, and Roy Freuhauf, president of Fruehauf Trailer Company. . . . p.8

FORUM: New rate-making approach is needed . . .

. . . for railroads to get the increased earnings they must have to keep up with the nation's demands on them for more and better service. That approach can be based on facts, facts about costs and about actual and potential traffic movements. Then the nation's railroads can drop rule-of-thumb rate methods. . . . p.31

Control of dust makes friends . . .

. . . for the B&O among neighbors and employees at its ore and coal docks on Baltimore harbor. . . . p.32

Built to cut unloading costs . . .

. . . the BAR's new pulpwood cars introduce Southern ideas to "Down East" shippers—and save money too. . . . p.34

Radio helps the C&EI . . .

. . . where wayside stations, cabooses, road engines and switchers are all in immediate reach of dispatchers, and yardmasters and trainmasters always can keep in touch with activities under their control. . . . p.36

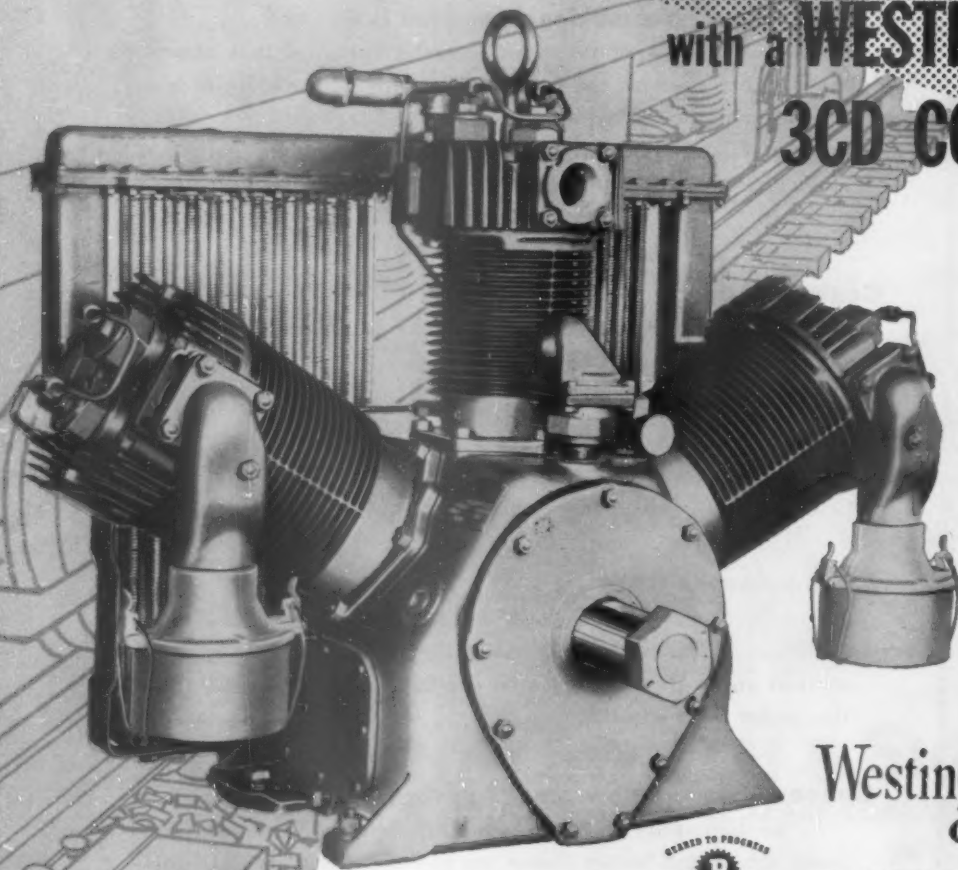
Caboose bay window moves upstairs . . .

. . . to the cupola on new Monon equipment. More comfort, more safety and better vision are the objectives of the functional design. . . . p.38



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with a **WESTINGHOUSE**
3CD COMPRESSOR



When you consider all the uses for air on a modern train, no single air device is more important than the air compressor.

The Westinghouse Air Brake 3CD compressor, shown here, is unsurpassed for reliability. Millions of hours of operation have proved it to be a most dependable compressor for railroad use.

Westinghouse Air Brake
COMPANY

AIR BRAKE DIVISION  WILMERDING, PA.



Current Statistics

Operating revenues, nine months	
1956	\$7,829,083,355
1955	7,466,749,844
Operating expenses, nine months	
1956	\$6,032,499,606
1955	5,619,486,124
Taxes nine months	
1956	\$831,812,299
1955	820,788,381
Net railway operating income, nine months	
1956	\$773,057,071
1955	836,306,002
Net income, estimated, nine months	
1956	\$607,000,000
1955	658,000,000
Average price 20 railroad stocks	
November 13, 1956	97.29
November 15, 1955	97.03
Carloadings revenue freight	
Forty-four weeks, 1956	32,261,918
Forty-four weeks, 1955	32,013,496
Average daily freight car surplus	
Wk. ended Nov. 10, 1956 ..	2,843
Wk. ended Nov. 12, 1955 ..	2,755
Average daily freight car shortage	
Wk. ended Nov. 10, 1956 ..	8,967
Wk. ended Nov. 12, 1955 ..	17,862
Freight cars on order	
October 1, 1956	122,421
October 1, 1955	52,913
Freight cars delivered	
Nine months, 1956	47,897
Nine months, 1955	25,901
Average number railroad employees	
Mid-October 1956	1,041,456
Mid-October 1955	1,086,858

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Week at a Glance CONTINUED

BRIEFS

Five members of the ICC . . .

. . . flew by private plane from Washington to Houston November 8 to attend a dinner sponsored by port and transport organizations of that area. The speaker, Chairman Arpaia, was accompanied by Commissioners Tuggle, Winchell, Hutchinson and Walrath. Wives of the latter four also made the trip. The party returned to Washington by commercial plane.

Setting the stage for abandonment . . .

. . . of the service is what the Railway Labor Executives' Association says six Eastern railroads are doing in pushing their plea for authority to raise first-class fares by 45%. RLEA has advised the ICC that prospective gains would be offset by prospective losses, with results adverse to the public and railroad employees.

A 41% climb in railroad ton-miles . . .

. . . is forecast for 1965 in a report prepared for the Railway Progress Institute. To handle the 880 billion ton-mile potential, the report states, the railroads will need 179,000 additional freight cars and 2,400 more locomotive units.

Rail movement of circuses . . .

. . . is common carriage or transportation under private contract, depending upon the facts in each case. The ICC has so ruled in a report on the investigation of the matter (No. 31656) which it instituted in 1954. Where the facts indicate a common-carrier role, railroads may not make contracts purporting to limit their liability.

August's freight revenue index was up . . .

. . . to 120.7, 11.3 points above July's 109.4. The index, calculated by the ICC's Bureau of Transport Economics and Statistics, is based on averages of the 1947-49 months as 100.

Inventory of motor carrier certificates . . .

. . . will be compiled by the ICC. Chairman Arpaia says the "long-overdue" project should provide a "necessary basic tool" in the regulation of motor carriers. It will give accurate information as to how many carriers are authorized to serve any point or territory, on which commodities and in what kind of service.

When you recommend

JACKSON TRACK MAINTAINERS...



Your good judgment is confirmed by that large majority of railway officials who, during the past year, bought JACKSONS in preference to all other on-track tie-tamping equipment.

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RATES, EXPANDED SERVICE THE KEYS AS...

Piggyback Makes Strong Comeback

"Growth," "expansion" and "progress" are the by-words of piggybacking today.

Put to the test in a costly business slump brought on by the Ex Parte 196 freight rate increases last Spring, trailer-on-flat-car business on American railroads has rebounded with such vigor that the big questions to be answered are: "Where and how far do we go from here?"

Reports from railroads show that they have long since recouped the traffic lost after the rate hike and indicate also that piggyback volume in October exceeded that of any previous month in the two-year history of the service in general use.

The rate boost in March left many railroads "non-competitive" with truckers, who either had not yet boosted their prices correspondingly or "flagged out" rates on commodities they sought to win back from piggybacking railroads. As various truck groups increased their rates or, in some cases, where railroads made their own rates competitive, the pendulum once more swung back to the favor of the railroads.

One of the largest piggyback roads attributes "the strength with which this service has rallied and forged ahead to a new high mark" to the modern nature of the operation and to its "great growth potential."

"More and more traffic managers are coming to recognize the advantages of this type of service," this same road comments, noting that it plans steady expansion of its terminal facilities and arrangements with other roads for increased inter-line business.

New t-o-f-c developments are reported almost every week, whether they are extension of service to some previously excluded point, refinement of basic techniques, new wrinkles in loading or mooring equipment, or announcement by one of the dwindling number of holdout roads that

it's joining the new piggyback fold.

Forty roads now provide the service, with an average of about 4,000 cars loaded a week.

Confidence in growth of the service is voiced by many railroad officers, among them Lackawanna General Traffic Manager J. L. Barngrove, Jr., who believes the "traffic will continue to grow, particularly as additional areas are brought into the picture." The accompanying table illustrates how sharply Lackawanna t-o-f-c business turned up once its rates were equalized—near the end of August. The table recording the Pennsylvania's recent experience indicates that only the rate-hike slump and the summer steel strike has kept this road from matching the \$10 million-a-year pace it anticipated following last year's \$5 million piggyback revenues. Both the PRR and Lackawanna had record months in October.

A peak in piggyback traffic was reached by the Louisville & Nashville just before the rate increase, but

J. K. Dent, vice-president, traffic, says that by now "we have substantially recaptured the traffic we lost . . . and have picked up some to offset what has not been recovered. I feel that long-range prospects for increasing our piggyback traffic are good and also believe that this appraisal would apply to industry-wide service."

Similar optimism is voiced by G. C. Frank, assistant to the president, Erie, who sees t-o-f-c prospects "immediately and from a long range viewpoint extremely good, since there is an almost unlimited potential available." He reports that Erie tonnage through October was up by 33% over April and nearly 50% over March.

Not all roads lost business after the rate hike. The Illinois Central reports its t-o-f-c traffic grew right through the spring and is still growing. V. P. Brown, Great Northern general freight traffic manager, says his road encountered no "serious diversion" and adds that GN trailer

THE RAILWAY WEEK

RAILWAY AGE
 Workbook of the Railways

SHOWING EFFECT OF EX PARTE 196 . . .

Piggybacking Takes a Nosedive

Railroads, losing business in many areas since 6% rate increase, must decide on paring t-o-f-c tariffs or "sweating it out" until more truck rates go up

"It's asking the shipper to pay a 6% penalty to route his goods by piggyback," a railroad traffic officer said last week, confirming reports

Flag-Outs the Snare—Individual rate cutting is called "the real hooker" by one piggyback salesman who says it will take time to

doesn't think it's "startling." At any rate, he notes—with an eye on rate-clipping truckers—"The DEAW plans to keep its rates competitive."

Here's How We Saw it in April . . .

Spring slump in piggybacking followed freight rate hike and prompted this report in *Railway Age* (Apr. 23, p. 7). T-O-F-C business took brighter turn later and is still going up. If

pending 7% freight rate increase is applied across-the-board, it is felt that this could have adverse effect on piggyback traffic, possibly bring about repeat of April situation.

	PENNSYLVANIA		LACKAWANNA	
	All-Rail Plan	Common Carrier Plan	All-Rail Only	Trailer Loads
Jan.	Trailers 1,579	Revenue \$310,028	Trailers 2,124	Revenue \$374,435
Feb.	1,714	324,350	2,463	434,657
Mar.	1,519	274,046	3,080	560,060
Apr.	1,324	271,665	2,218	409,814
May	1,536	313,448	2,430	471,361
June	1,666	297,971	2,271	426,225
July	819	173,224	1,320	242,448
Aug.	1,339	275,500	1,879	320,038
Sep.	1,249	262,381	3,029	510,162
Oct.	1,560	314,609	4,885	815,004
				1,000 (est.)

HOW HARD railroads were hit by Ex Parte 196 freight rate hike is indicated by the above summaries of Pennsylvania and Lackawanna business. Lull in piggyback traffic began late in March, which otherwise would

have been expected to continue upward trend seen in January-March figures. Both roads also were hurt by the steel strike. Total PRR revenues for both types of service in this year's first 10 months amount to \$7,381,834.

load traffic has grown so steadily it is "considerably greater" than it was last April.

The Kansas City Southern, a newcomer to the service at the time of the rate hike, said it has been expanding its original scale of operations. J. W. Scott, vice-president, traffic, says new terminal installations, plus new cars and trailers it has ordered, will enable the KCS to boost its business even more.

A major western road reports a constant upward trend, noting that the monthly average of its interstate t-o-f-c business, May through September, was 8% higher than in April. Western roads generally report booming t-o-f-c traffic. The Northern Pacific announced just last week it is stretching its new Fargo, N. D.-Dickinson service 330 miles further, to Billings, Mont.

"Intensive solicitation, extending the service to additional points, and universal shipper satisfaction," have swelled the railroad-billed "plan 2" traffic of one eastern line to six times the amount it moved in April, the road's traffic vice-president relates. He says his sales forces stress

that the "plan 2" service is "competitive with the truckers . . . and that if shippers wish to avoid general increases on low grade commodities the railroads are handling, they should give us as much 'plan 2' business as possible."

Only slightly affected by the rate hike, the Chicago & North Western sees a "very encouraging future" for its own service and "a steady sizeable growth" in all piggybacking, T. L. Norton, vice-president, traffic, reports.

Striking recoveries from the spring slump are reported by the Baltimore & Ohio and the Wabash, both estimating that their October loadings were of record proportions. A. W. Richardson, vice-president, traffic, Wabash, attributes this resurgence to equalization of rates and expansion of service (recurring notes in most reports), and says he is "extremely optimistic about immediate and long range prospects."

The B&O, which did not "get back on its feet until August" because of the added "roadblock" interposed by the steel strike, cites growth of interline service and use of such equip-

ment as flat-bed trailers and refrigerated vans as vital to piggyback growth. "I see no reason," Freight Traffic Manager F. T. Lean said, "why t-o-f-c should not continue to grow. Shippers have come to recognize its dependability . . . and as this confidence grows so will the volume."

Santa Fe piggyback traffic in September was 150% over that handled in the same month last year, G. B. Kelley, assistant to general freight traffic manager, states. The road is overcoming its inability to give service from and to any point on its lines through "continued expansion" and the "broadening of our tariff application," Mr. Kelley asserted.

To meet highway competition, a Union Pacific spokesman said, this road is continuing traffic analyses and other studies to determine the usefulness of piggyback or other service.

T-O-F-C's future is appraised by L. A. Schellenberger, general merchandise agent, Illinois Central: "We believe there are many factors to be considered in appraising the long-range prospects for piggyback in the railroad industry as a whole. While considerable progress has been made, real opportunities for piggyback on an industry-wide basis lie in working out a successful interchange plan among the various railroads. Such a plan necessarily embraces such factors as standardization of equipment, establishment of compensatory rates, working out proper per diem charges for trailer and rail equipment, and others. We have no doubt that within time all these factors can and will be satisfactorily worked out."

Piggyback Worth an Extra \$1 Billion Yearly

Ryan, Fruehauf and Von Willer concur in painting optimistic picture—All three types of the service can "live" on same railroad, says new Erie president

Enthusiastic predictions about the future of piggybacking were made by three speakers at the recent fourth eastern regional convention of railroad security analysts in New York.

Joining forces in what was essentially a common viewpoint on the outlook were:

Eugene F. Ryan, president, Rail-Trailer Company — "Piggybacking can bring the railroads \$1 billion a year in new revenue, with benefit to themselves and to the truckers."

Roy Fruehauf, president, Fruehauf Trailer Company—"Piggyback has a brilliant future."

H. W. Von Willer, president, Erie — "All types of piggyback transportation have shown regular and constant growth, and I am sure they have a splendid potential and a fine future."

To support his prediction of a "billion-dollar gross," Mr. Ryan pointed out that: "TrucTrain" service on the Pennsylvania alone handled, in October, "a record total of 4,800 motor common carrier trail- (Continued on page 10)"

MARKET OUTLOOK THIS WEEK

Carloadings Down.—Loadings of revenue freight in the week ended November 10 totaled 772,761 cars, the Association of American Railroads announced on November 15. This was a decrease of 27,511 cars, or 3.4%, compared with the previous week; a decrease of 19,281 cars, or 2.4%, compared with the corresponding week last year; and an increase of 64,012 cars, or 9.0%, compared with the equivalent 1954 week.

Loadings of revenue freight for the week ended November 3 totaled 800,272 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, November 3			
District	1956	1955	1954
Eastern	127,924	133,802	112,819
Alleghany	153,524	148,992	122,286
Poconantus	65,240	63,095	50,007
Southern	131,390	135,929	121,140
Northwestern ..	128,596	121,613	96,467
Central Western	133,579	138,978	135,889
Southwestern ..	60,019	61,852	57,418
Total Western			
Districts	322,194	322,443	289,774
Total All Roads	800,272	804,261	696,026
Commodities:			
Grain and grain			
products	55,886	55,337	55,778
Livestock	12,743	14,386	14,035
Coal	144,659	138,023	125,158
Coke	12,300	13,414	8,683
Forest Products ..	43,560	45,195	44,717
Ore	80,854	69,476	34,554
Merchandise l.c.l.	62,065	65,234	64,399
Miscellaneous ..	388,205	402,996	348,702
November 3 ..	800,272	804,261	696,026
October 27	816,803	829,648	736,233
October 20	828,741	829,078	745,945
October 13	823,207	821,578	721,336
October 6	815,004	801,559	702,910
Cumulative total,			
44 weeks	32,261,918	32,013,496	28,877,570

IN CANADA.—Carloadings for the ten-day period ended October 31 totaled 141,718 cars, compared with 95,429 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 31, 1956	141,718	52,816
October 31, 1955	114,547	50,295
Cumulative Totals:		
October 31, 1956	3,724,031	1,455,263
October 31, 1955	3,395,011	1,364,629

New Equipment

FREIGHT-TRAIN CARS

► **Duluth, Missabe & Iron Range.**—Ordered 500 70-ton ore cars, ACF Industries, for delivery in third quarter 1957.

► **National of Mexico.**—Ordered 100 30-ton cabooses, Magor Car; delivery expected early next year.

► **Rail-Trailer Company.**—Requested bids for 200 75-ft flat cars for pooling service it provides to eight railroads participating in Trailer Train piggyback operations.

► **Western Maryland.**—Ordered 300 70-ton hopper cars, Bethlehem Steel, and 100 70-ton covered hopper cars, Greenville Steel Car; delivery is scheduled for next June and July.

PASSENGER-TRAIN CARS

► **Canadian National.**—Ordered eight additional rail diesel cars, Budd; included are one RDC-3, three RDC-1s and four RDC-4s; delivery expected to be completed by June 1957.

LOCOMOTIVES

► **Chesapeake & Ohio.**—Directors authorized purchase of 30 diesel-electric units for deliver next year; cost \$5,700,000.

► **Costa Rica.**—This country's government has ordered 14 500-hp diesel-electric units from General Electric; approximate cost \$1,300,000; units, when put into service next spring, will replace 34 steam locomotives to provide main line passenger-freight service between Caribbean port of Limon and capital city of San Jose; each unit will have two narrow-gage, two-axle, side-equalized swivel trucks.

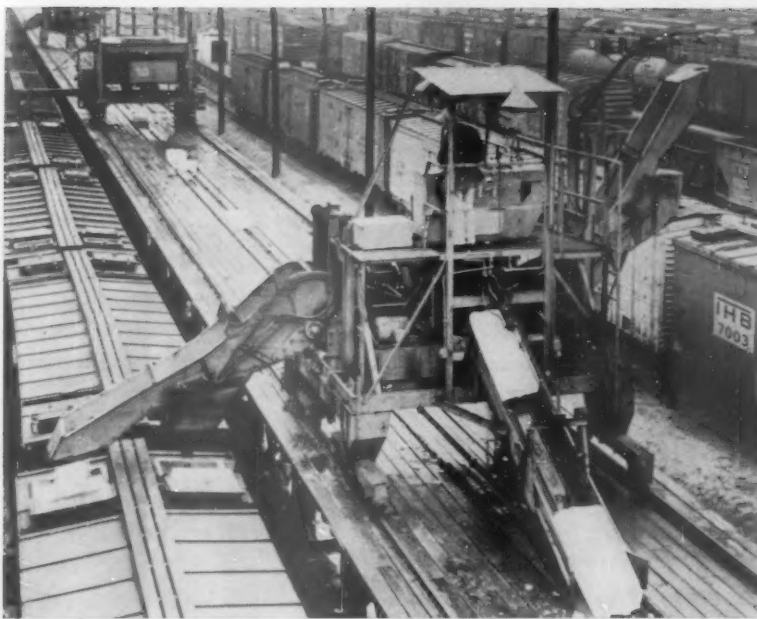
New Facilities

► **Union Pacific.**—Has completed 8-mile line relocation project between Moyer Junction, Wyo., and Nugget; UP expects to complete CTC installation between Granger, Wyo., and Pocatello, Ida., next year; cost of both projects is \$10,000,000.

► **Western Pacific.**—Directors have approved construction of new freight station at 54th avenue and San Leandro street in Oakland, Cal.; new station will replace present antiquated and congested facilities at Fruitvale.

Miscellaneous

► **Union Pacific.**—Has acquired 50 additional acres of land for industrial development adjacent to its Rockwood Industrial District, Portland, Ore.



Train Delays Cut with Expanded IHB Icing Facility

It takes less than one minute to re-ice a refrigerator car with this new Link-Belt Company car icer at the City Products Corporation-Indiana Harbor Belt Blue Island, Ill., icing station. The station dock can accommodate 80 cars at one time. During summer

months it services about 1,400 cars a day. City Products—which last week completed an expansion and speed-up program that included purchase of three Link-Belt model 55 dock-type car icers—operates 154 icing and re-icing stations.

(Continued from page 8)

ers." With an average trailer trip of over 800 miles, and revenue of 22 cents per mile, this means, he said, "about \$800,000 of gross revenue in October—an annual rate of nearly \$10 million."

While conceding that "other forms of trailer-on-flat-car service (such as the all-rail operations conducted by many railroads) will continue to exist," Mr. Ryan told the analysts that "no other form of trailer-on-flat-car service can compare with the railroad-motor common carrier operation from the standpoint of available traffic volume, traffic balance, utilization of equipment, and revenue potentialities." "I believe," he added, "that widespread acceptance of this fact by leaders of the transportation industry is close at hand. If this proves to be the case, we can look forward to a material strengthening of the railroad and highway common carriers' position in the national economy."

He further predicted possible equipment financing requirements within the next 10 years of \$2 bil-

lion for 50,000 long flat cars and 300,000 trailers and containers. Realization of his anticipated new railroad revenue of \$1 billion, he pointed out, would require the railroads to handle only about one-fourth of the total motor common carrier line-haul traffic to be expected 10 years from now.

Mr. Fruehauf, apparently even more optimistic than Mr. Ryan, declared that "piggyback 'won't ever stop. It will replace practically every box car in the country.'" As the basis for this prediction, he described piggyback as "cooperative transport" which "combines two unlike forms of transportation to produce the best advantages of both." "It provides shippers," he said, "with service equal to trailer service, on the mass transportation principal of the railroad. As a result, it is profitable to the railroads, it is growing fast, and it saves investment funds."

As Mr. Fruehauf sees it, "nobody is losing traffic through piggyback," because available traffic as a whole is steadily growing. "There is no fixed amount of traffic to be fought over.

Better service and lower rates mean more business." He called attention also to the fact that piggybacking, given special types of truck trailers, can be used for bulk commodities, which, he said, means that its "horizons are unlimited."

Piggyback transportation, in Mr. Von Willer's opinion, "is a definite step forward. From the standpoint of economics and logic, it has a permanent place in our transportation field."

Three different types of piggyback—railroad operated, truck common carrier and shipper trailers—"can be operated on the same railroad at the same time," he declared. In fact, he continued, in answer to some of the specific questions around which his speech was built, "the eventual outcome" may be to have all three types live on the same rail line "with each method supplying a particular economic need."

Another future possibility, as Mr. Von Willer sees it, is that piggyback "may bring into being . . . transportation companies interested in doing an overall transportation job which will find the buyer's need regardless of the type of service or carrier."

Reporting specifically on the Erie's experience, he stated that 90% of its piggyback traffic is "new business"; that it is profitable on an out-of-pocket basis at the present time; and that his company has plans for joining with the New Haven, about January 1, in interline common carrier piggyback between Chicago and New England points.

Freezing Fruits Not "Manufacturing"

The United States Supreme Court has upheld a lower-court ruling to the effect that truck transportation of frozen fruits and vegetables is exempt from regulation under the Motor Carrier Act's so-called agricultural exemptions.

The Supreme Court's decision, unaccompanied by an opinion, was an order affirming the lower-court ruling which was made in the federal district court at Bellingham, Wash.

The case was docketed in the Supreme Court as No. 365, Interstate Commerce Commission v. Home Transfer & Storage Co. The lower-court decision, now sustained, set aside an ICC order which held that

frozen fruits and vegetables were covered by the exemption proviso.

In a statement supporting its unsuccessful appeal, the commission advised the Supreme Court that the issue was a "substantial" one. It also said:

"If motor carriage of frozen fruits and vegetables is to be exempted, with consequent rate cutting and unrestrained competition by unregulated truckers, it is reasonable to assume that rail carriers, as well as presently regulated motor carriers, will lose much of this traffic to 'exempt' motor carriers. Large investments in equipment have been made on the assumption that transportation of frozen fruits and vegetables is subject to the certificate and rate provisions of the act.

"Public transportation cannot survive on a diminishing volume of traffic without seriously affecting the nation's economy through increases in freight rates on the remaining traffic on a deterioration of service and equipment through the weakening of public carriers."

New Era Challenges RR Traffic Men

Railroad traffic men today live and work in a climate quite different from that prevailing 20 or even 10 years ago. Competition from other transportation agencies is growing, of course, especially in the direction of more private trucking. But other developments are of major significance to the traffic man—widespread consolidation of industries; decentralization of plants; growth of central industrial traffic organizations staffed by specialists; and increasing dependence on regularity of deliveries in lieu of large inventories.

These points were brought out by F. S. Baird, vice-president in charge of traffic of the Norfolk & Western, during that road's fifth annual Traffic Department Conference, held this year at Columbus, Ohio, November 8 and 9.

"Optimistic"—that's the word N&W President R. H. Smith used to sum up for the meeting his appraisal of the present and prospective business outlook. This viewpoint was developed by Stuart T. Saunders, executive vice-president. Forecasts during the next 10 years in the vicinity of increases of 38% in ton-miles aren't applicable to the N&W, he said,

as he expects that road's traffic increase in that period to exceed the national average by a "considerable margin." The N&W should show a 50% increase, he indicated.

"The time has come for clear-headed planning on the part of railroads," said Mr. Saunders. "Optimism must be balanced with good judgment and common sense."

"Act now"—So that railroads can handle this inevitable increase in business "profitably and with all the efficiency of which they are capable," he added, they must proceed at once to put their equipment and facilities in order.

Where will railroads get the money for this great capital expenditure? There are only four possible sources: depreciation, net earnings, sale of securities, or government subsidy. The last-named isn't for a free economy; and depreciation is relatively fixed. That means that net income and additional financing to-

gether must provide over the next 10 years about twice as much capital annually as railroads have obtained in this manner in recent years.

"On the basis of present earnings railroads cannot possibly raise the necessary funds from net income or outside investments," said Mr. Saunders. There must be a "decided improvement" in net. To obtain this improvement, railroads must be allowed freedom to compete for freight on fair and equal terms, he declared, and there must be a further increase in rates.

Job for salesmen—One of the traffic man's most important functions right now, Mr. Saunders said, "is to inform the shipping public of the urgent need of railroads for increased earnings. . . . Consider with them what the alternative is. . . . Under our present rate structure and our present system of regulatory control . . . government ownership seems inevitable."

Southern Roads Enter Rate Case

Southern railroads have entered the interim-increase phase of the Ex Parte 206 case. On November 14, they filed with the Interstate Commerce Commission a petition for authority to make an immediate 7% increase in freight rates to offset higher costs and obtain funds to continue their capital improvement programs.

Joining in the motion with the southern lines were the Illinois Central, Frisco, and Gulf, Mobile & Ohio. Those roads, with lines in western territory, too, had refrained from joining in pleas filed previously by eastern and western roads for a 15% increase to improve their rates of return and for the "emergency" 7%, which would be in addition to the 15%. Like the southern roads, they are still not in the case's 15% phase.

Chicago to Kansas City shift of hearing and oral argument on the 7% phase has been announced by the ICC. No changes in dates are involved, the hearing being still scheduled for November 26 and the oral argument for December 3.

Exceptions to the general 7% increase proposed in the Southern roads' motion would apply on various kinds of coal traffic. As to that the proposed increases would be 10 cents per net ton.

The same exceptions are proposed in the interim-increase motion filed by eastern and western roads (Rail-



Streamliner for Santa

Santa has gone modern in the Snowflake Valley Christmas display at the Eaton store in Toronto, Ont. "Tiny Tim" David Nevins is shown riding on the inaugural run of a model of the Canadian National's Super Continental. Train orders permitting "Santa Claus extra, Santa Village to Wonderland and return" are handed by Norman A. Walford, CNR general manager, Central Region, to one of Santa's helpers.

way Age, Nov. 12, p. 7). That motion also proposes holdowns on fresh fruits and vegetables and canned goods, which are not proposed in the petition of the southern roads.

Prospective yield from their proposal was put at about \$85 million a year by the southern roads. Cost increases sought to be offset were put at \$58 million a year. The difference would provide funds for continuance of improvement programs, raising the rate of return

from the recent 5.18% basis to about 5.54%.

In the case's 15% phase, the commission has received the petition of 21 state utility commissions who contend that the "full hearing" required by the Interstate Commerce Act will not be afforded by the procedures now scheduled (Railway Age, Oct. 8, p. 7, and Nov. 12, p. 8).

The state commissioners want more time, regional hearings, and the opportunity to present their oral testimony.

Method for Fast Haul of Perishables

A new system of fast, long-distance hauling of perishable foods has just been developed and successfully tested.

Cooperating in the project were the North American Car Corporation, George A. Hormel & Co., Foster-Built Bunkers, Inc., the Clark Equipment Company and the Pure Carbonic Company.

The operation utilizes a specially adapted railroad flat car, built by North American, which holds four mobile refrigerator units equipped with Foster-Built Dry Ice bunkers.

With the new system, perishables can be prepacked for a specific delivery route at the packing plant and held in the original refrigeration units at a constant temperature until delivery at the stores. The bunkers—which insure even, proper cold temperatures for prolonged periods—are equipped with blowers that force air over the dry ice twice and then circulate the chilled air evenly through the interior of the refrigerator unit.

The reefers are held in place by a special locking device, developed by Clark Equipment, which makes it possible for the reefers to be lifted onto the railroad car and locked in place—or unlocked and unloaded—by one man operating a fork lift truck. Each of the four mobile reefers is transferred from the railroad car to a waiting truck, also equipped with the locking mechanism. Thus, the refrigerated units are not opened from the time they leave the packing plant until they arrive at retail stores.

First experimental run was from the Hormel Packing Company at Austin, Minn., to Chicago. The flat car left Austin at noon and arrived in Chicago the following morning. Within 30 minutes the four mobile reefers, each holding 10,000 lb of meat, were transferred to trucks and on their way to a scheduled sequence of stores. In the customary transfer of product from refrigerator car to truck, the time required is said to be from two to four hours.



REEFER UNITS are easily handled by fork lift truck.

Trucker Wrecks Passenger Train, Gets \$200 Fine

The driver of a loaded gravel truck who ignored a grade crossing warning signal and drove into the side of a Milwaukee excursion train at DuPlainville, Wis., wrecking the train and injuring about 100 children, was fined \$200 and "costs" in the Waukesha, Wis. Municipal Court recently. The Milwaukee Road public relations department picked up this information last week in a memo to newspaper editors which said:

"'Costs' would mean only Municipal court expense—there's no measuring compensation for the suffering of the children and the agony of their parents in dollars and cents. Nor do 'costs' include recognition of the skill and untiring efforts of the doctors and nurses and hospital attaches, or the good neighbors who rendered first aid.

"And then there's the more than \$200,000 cost to the railroad for damage to its equipment, track and signals, including the warning signals at the crossing that said 'Stop—a train is coming.'"

Central Seeks Injunction Against New York PSC

The New York Central last week filed for a New York Supreme Court injunction against a New York Public Service Commission order which it says run counter to a prior PSC ruling. In effect, Central said, the latest PSC order would prevent the road from carrying out schedules on its West Shore line that the commission authorized September 25.

ICC Approves NYC Trucking Plan

Reduction of \$600,000 per year in out-of-pocket costs and release of some 2,600 box cars for "more effective service" are expected to result from a New York Central truck operating plan which has been approved by the Interstate Commerce Commission.

Subject to the usual conditions designed to insure that the truck operations will remain auxiliary to rail service, the commission has granted the Central a certificate authorizing trucking on 45 routes generally parallel to the main lines. (Continued on page 39)

SUPPLIERS URGE RAILROADS . . .

Let's Look Ahead to Stay Ahead

American railroads will need 179,000 more freight cars and 2,400 extra locomotive units by 1965 if they are to meet the expected demands of a business surge that could produce 255 billion additional ton-miles annually.

That is the principal conclusion in a comprehensive study of railroad traffic potential prepared for the Railway Progress Institute and released by RPI Chairman E. O. Boshell at the institute's annual dinner in New York November 15.

The report, prepared by Transportation Facts, Inc., of Chicago, forecast a 41% climb in railroad ton-miles over the next 10 years—from 1955's 625 billion to 880 billion in 1965.

The estimates on new equipment needs are in addition to needs for replacement of freight cars and locomotives that will become by 1965, or are already, obsolete. A total of 798,212 freight cars, exclusive of cabooses, work cars or cars in private car fleets, must be acquired during the 10-year period, the report stated. The report figured that acquisition of 79,280 new cars a year and retirement of 61,920 would give railroads the "desired fleet of 1,879,000 cars by 1965."

However, it recommended that a scaled acquisition-retirement program be developed, starting with installation of 73,000 new cars this year and retirement of 57,000, and concluding with 67,000 retirements and 88,000 installations in 1965.

Continued expansion of piggyback operations by railroads is a major part of the report's computations. Anticipating that T-O-F-C would account for 50 billion ton-miles of the 1965 total, the report states that "the inherently more economical over-the-road rail movement of highway trailers on flat cars must inevitably attract more and more business." To handle this volume, the report estimates, the railroad flat-car fleet of 75,000 will have to be doubled by 1965.

The locomotive fleet anticipated by the report for 1965 would come to 33,800 units. However, the report warns that a two-for-one steam loco-

motive and diesel replacement pattern will, if continued, cause a locomotive shortage. Consequently, the report states, the railroads' 6,050 steam units "must ultimately be replaced by diesel units just to maintain existing capacity. These 6,050 units are the first requirement for 1965."

Its estimates are actually conservative, the report states, and warns that if national income increases faster than has been expected, "the equipment requirements we have outlined would be woefully inadequate. Many more locomotives and freight cars than postulated would be needed."

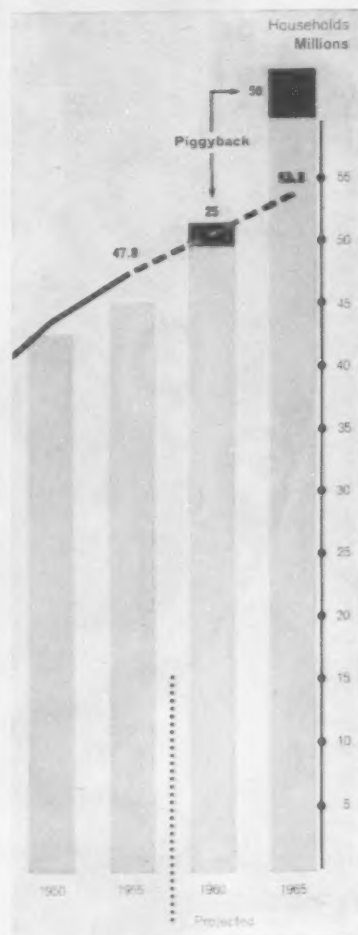
As to the passenger service outlook, the report said: "By 1965, a level of 30 billion passenger-miles can be reached because traffic will have leveled off to the normal growth curve and stabilized at about one-third of the total intercity common carrier market." A drop to about 25 billion passenger-miles by 1960 is anticipated because the report doubts that a program can be started in less than five years to provide railroads with "some type of light, standardized equipment operating at slightly higher speeds and lower fares" in order to bring traffic back to the rails.

The total revenue passenger car fleet is expected to drop from 19,600 cars in 1955 to 14,300 in 1960 and 12,900 in 1965.

Key factors governing the report's forecasts are its analysis of the national economy coupled with the anticipated population growth. The essential elements governing the development of transportation, it stated, are "national income and household formation." The relation of freight traffic to these factors over the last 45 years has been consistent enough, the report said, to preclude radical shifts in the next decade. U.S. population was put at 190 million by 1965, while figures for gross national product and national income were estimated at \$535 billion and \$444 billion, respectively, for that year.

As one basis for its forecasts of rail ton-miles, the report showed that "in 1900, 9,000 rail ton-miles moved

per U.S. household. In 1955, the figure was 13,000 ton-miles. The indication is that possibly 16,400 ton-miles will move per household by 1965, including piggyback. This would put total rail traffic at 880 billion ton-miles in 1965, compared with 625 billion in 1955."



RR FREIGHT TREND compared with growth in number of households is illustrated in this chart taken from RPI report, a departure from forecasts which relate traffic to industrial production. Vertical columns represent ton-miles moved (500 billion in 1950, 625 billion in 1955, and estimates of 710 billion in 1960 and 880 billion in 1965). Anticipated number of households in 1956 is 53.5 million, compared with 47.8 million in 1955. Predicted piggyback traffic in 1960 and 1965 is shown in black at column tops.



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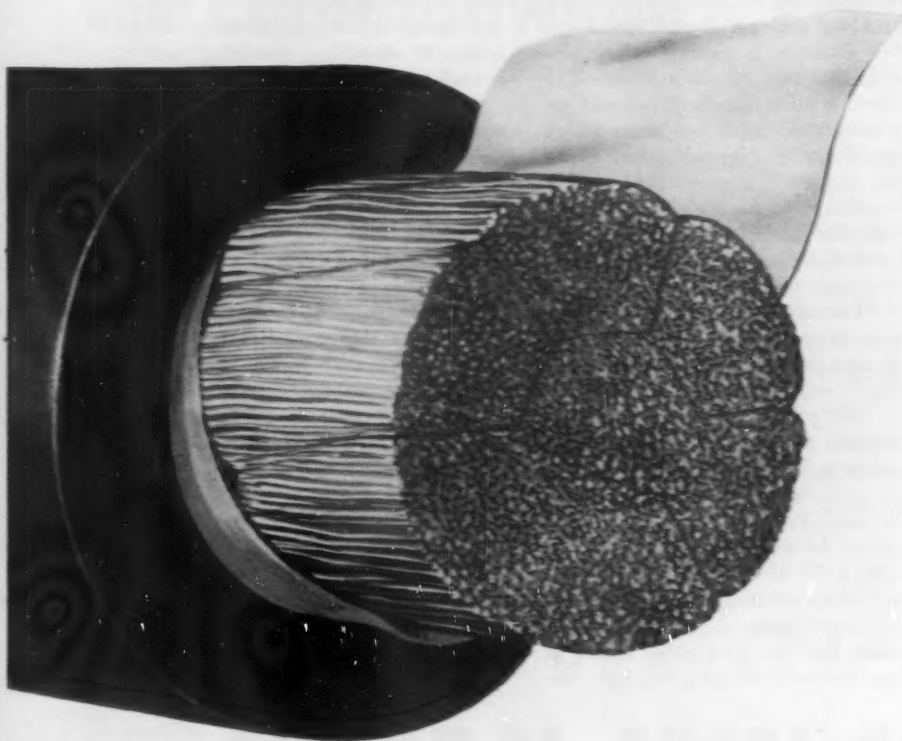
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Questions and Answers

Of current interest to the Transportation Department

Can the practice of "prior classification" of freight cars in interline movement be more widely followed, with advantage to the carriers . . .

?

[In this column, October 22, we carried one answer to this question from C. H. Sauls, vice-president—operations of the Seaboard Air Line. Here's another, and we'll have still another in a later issue.—G. C. R.]

Yes—under certain conditions.

"Prior classification of interline cars has not been used to the fullest in improving car handling; however, this system, when used on intraline cars, has shown the improvements which can be made. . . .

"The establishment of interline classification has moved slowly, since at points where large terminal companies exist they are not equipped to block for connections from each of those yards. The prior classification of cars seems to be a practicable possibility from almost any large master yard handling all interchange cars.

"Other facility limitations also play a part in delaying attempts to block for the receiving roads. Railroads, because of their own blocking plans, often are unable to provide additional tracks for their own necessary blocking.

"Although limited facilities do exist, perhaps we are not studying our own work patterns to the fullest. For example, it seems entirely possible that two railroads desirous of interline prior classification could get together and work out plans which would not require additional facilities and would improve car handling considerably. Such a plan would reduce car handling between two railroads having a large volume of interchange traffic.

"Volume is also a restrictive feature in progressing prior blocking of cars delivered to receiving roads. Small volumes would not appear to justify such a plan since it often requires the same amount of time to cut in and maintain small blocks as is required to switch an entire cut of cars. Prior classification of cars should be studied and considered at each point to utilize and develop its important advantages.

"Could such a policy in some cases lead to substantial delays at one terminal awaiting enough cars

to put in such a classification, just as holding for tonnage is said to do today?

"Establishment of solid trains to one destination is directly associated with volume. A large volume of traffic for one individual destination will not necessarily cause increased delay to cars moving to that destination, but could mean delayed cars for other destinations. Low volume to any point definitely restricts opportunity to run solid trains of one classification.

"A second point to consider in running through trains is the elimination of terminal delay when trains must pass through three or four terminals. Although cars, when held at an originating terminal, would undergo large initial delay, they would regain this lost time en route by being mainlined through intermediate terminals. Initial delay would then become quite secondary when one considers the possible improvements in switching, servicing, and overall train operation.

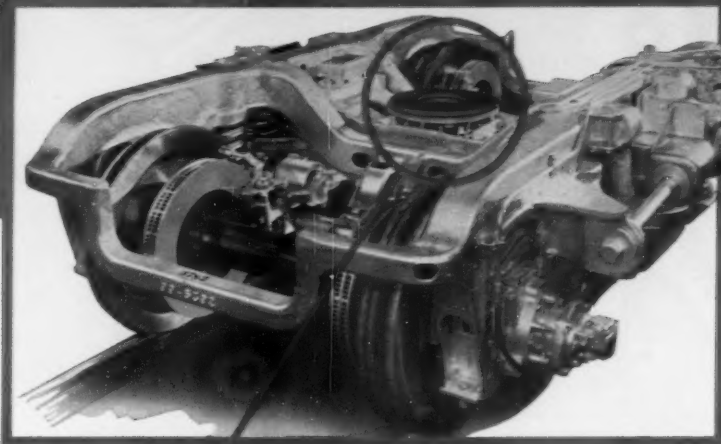
"Opportunities to improve train operation through this system can be determined by studying the arrival pattern of the cars, the distance of the operation, and the volume of the movement.

"Holding for single classification would in many cases make necessary increased capacity in the yards; however, while the capacities of some yards would need to be increased, the capacity problem of other yards would be eliminated. For example, mainlining of a train through any yard definitely would relieve the congestion of that yard.

"Objective analysis of this system should include a large portion, if not all, of any railroad, since the need for expensive facilities at one location might eliminate this need at other locations."—R. J. Stone, vice-president—operation, Frisco.

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

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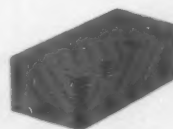
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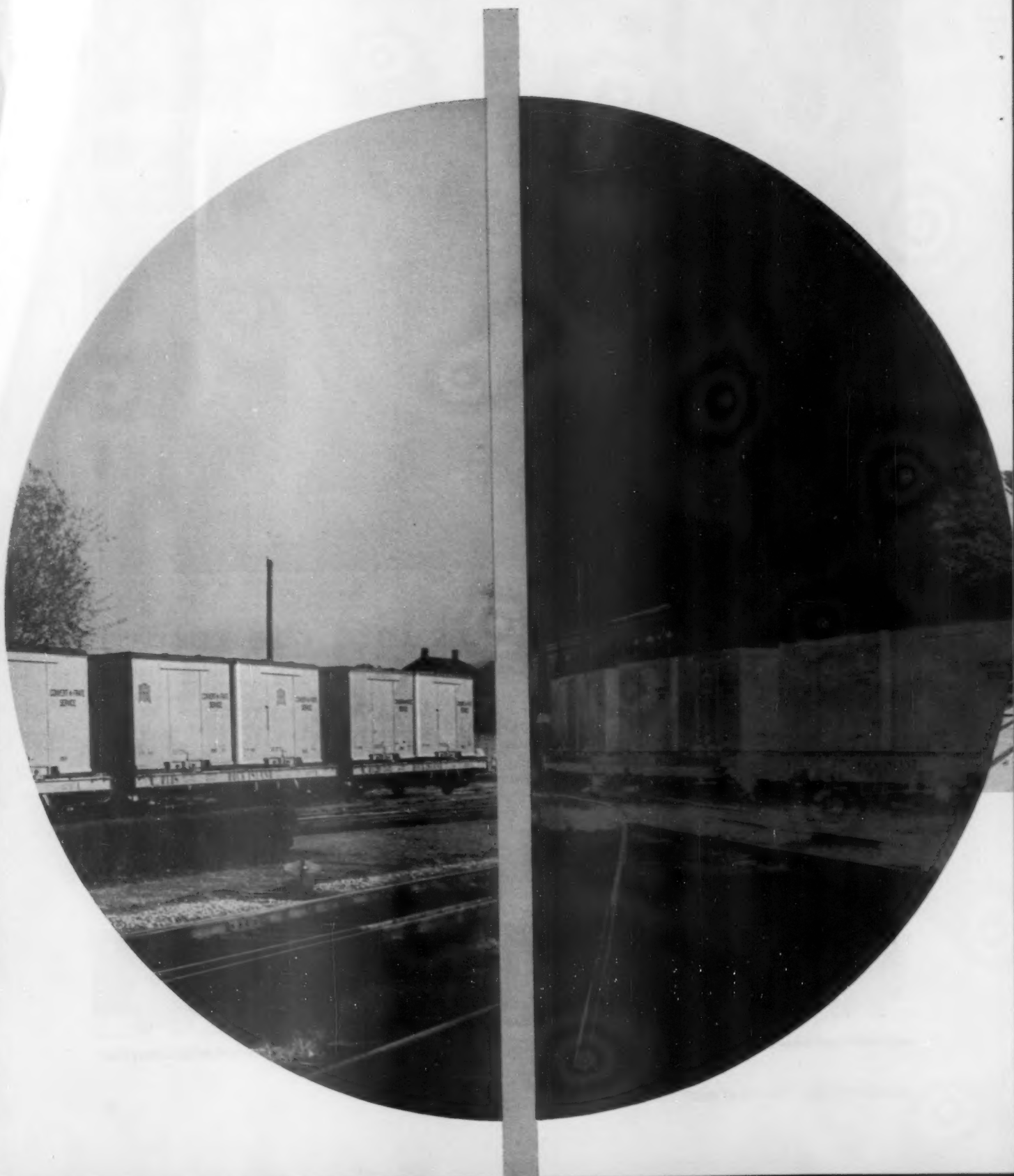
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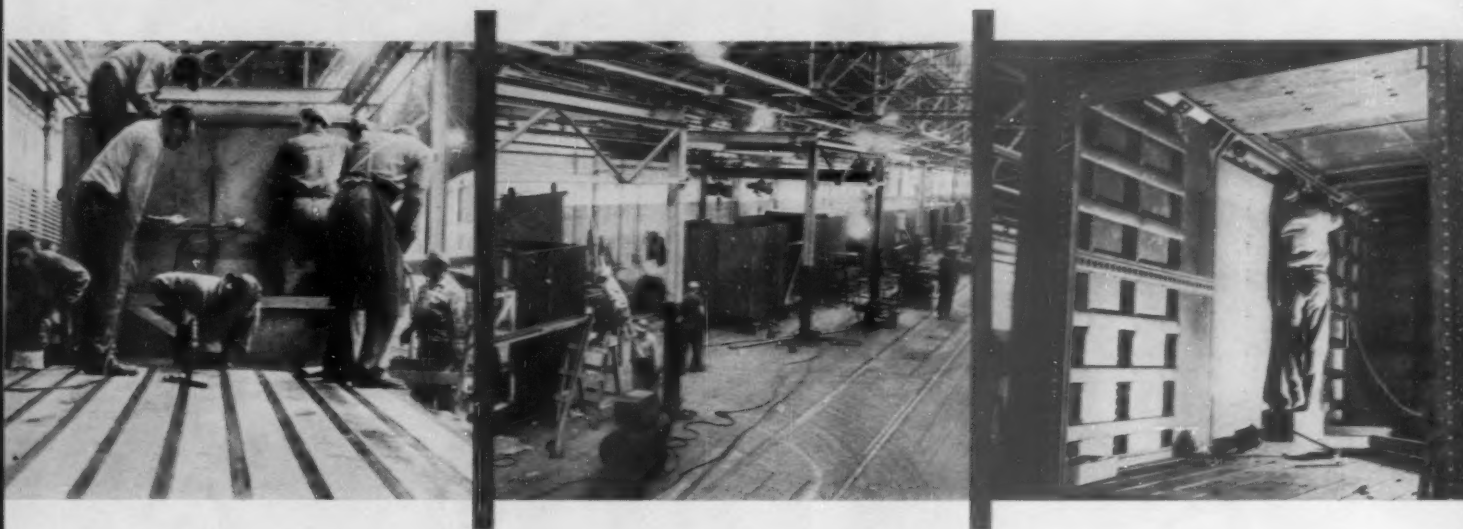
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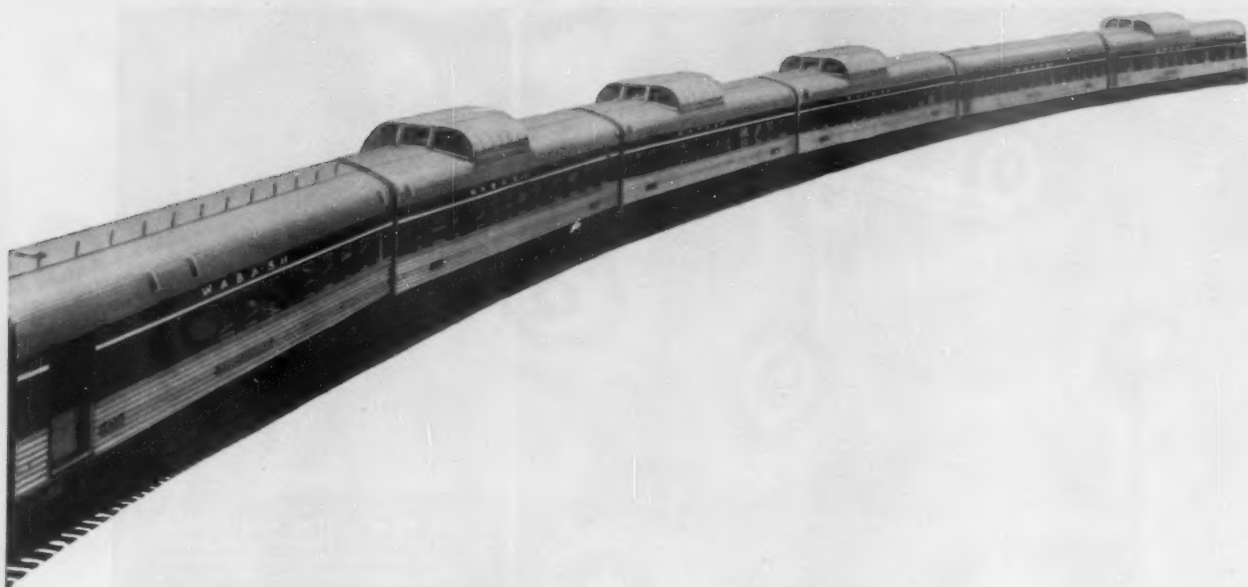
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Reputation-Maker for the Wabash...



One of the nation's most famous trains, the Wabash streamliner "Blue Bird", ties Chicago to St. Louis with an enviable record of on-time service. Passengers have come to rely on the comfort and dependability of this fast blue beauty — much as the Wabash has come to rely on Sinclair for lubricating protection. Sinclair is proud to supply the pride of the Wabash with GASCON® Diesel Lubricating Oil... honored, too, that the record shows over 100 U. S. railroads specify this outstanding Diesel lubricating oil.

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this ACME STEEL
grain door **IDEA** can help you
serve grain shippers better, faster

Proved in service, these Acme Steel Grain Doors provide a fast, economical barrier for grain or malt shipped in box cars.

They're easy to set up for loading. Unloading is fast and simple. In transit, or during loading and unloading, Acme Steel Grain Doors assure positive protection and control of the load. Heavy, reinforced, high quality paper, supported by horizontal steel beams and vertical, flexible steel slats holds grain load securely and clear of the car door.

Let an Acme Idea Man give you a demonstration, or show you the new fact-packed Acme Steel Grain Door movie, there is no obligation. Or write for folder today. Dept. RAG-116, Acme Steel Products Division, Acme Steel Company, 2840 Archer Avenue, Chicago 8, Ill.



GRAIN DOORS



ONE MAN . . . FIVE MINUTES . . .
Acme Steel furnishes all the parts, just unroll the package, drive ten nails per door and the Acme Steel Grain Door is in place.



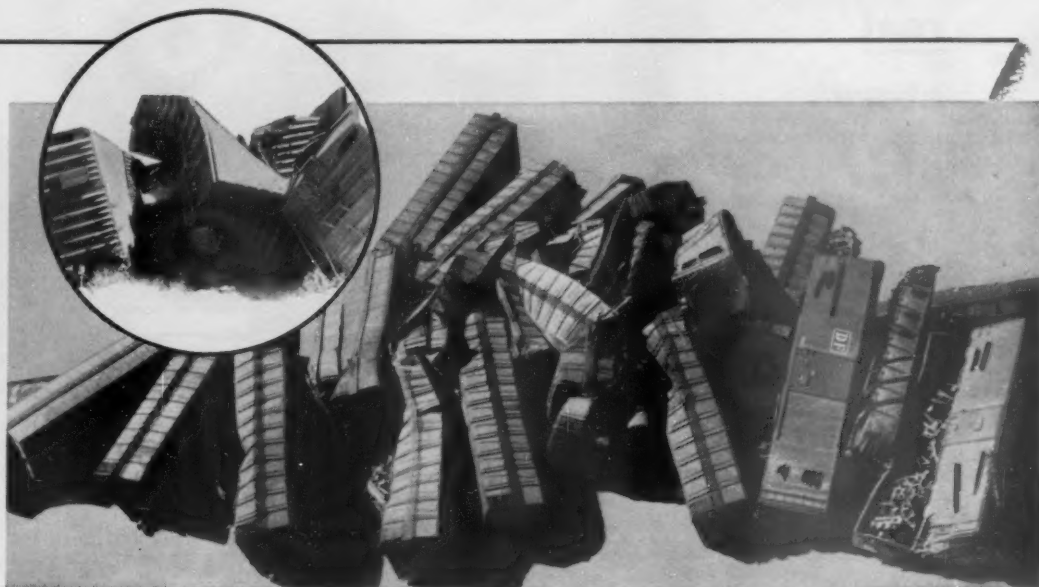
STRONG . . . TIGHT . . . severe tests prove that the Acme Steel Grain Door can take all the punishment encountered under all handling and transit conditions.



NO BULGE . . . EASY TO LOAD and UNLOAD . . . horizontal steel beams and vertical steel slats prevent bulge from springing the car door. Automatic and manual unloading are fast and easy.

Derailments like this are one in a million . . .

But DF^{*} Loader protection paid off!



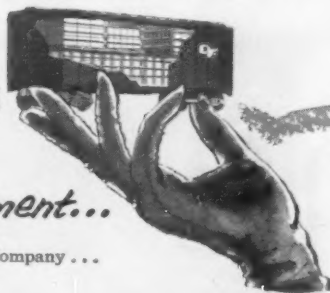
▼ What Modern Railroads had to say about this derailment

"A wreck out West showed how effective modern equipment can be. A 'Modern Railroads' editor came across a DF-equipped box car that had rolled over in a main line wreck. The car had been carrying plate glass. Although the car itself was as badly damaged as might be expected, the DF cross-members effectively braced the sides, and less than half the glass was damaged—after the car had been thoroughly ditched and several other cars had piled on top of it."

("Modern Railroads," September, 1956)

The Kid Glove Treatment...

*DF is a trademark of Evans Products Company . . .
Only Evans makes the DF Loader



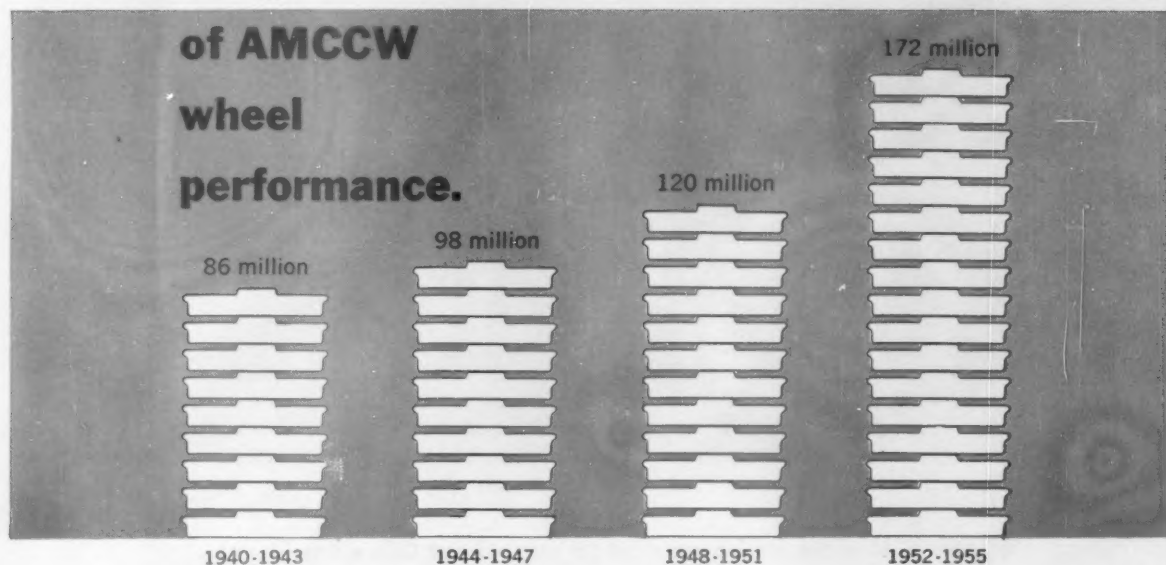
**LOCKS IN LADING . . . ELIMINATES
DAMAGE AND DUNNAGE**



EVANS PRODUCTS COMPANY, Plymouth, Mich., also produces: truck and bus heaters; bicycles and velocipedes; Evaneer fir plywood; Evanite hardboard; and Evanite battery separators

**ICC
records
tell the
real
story**

**of AMCCW
wheel
performance.**



each AMCCW wheel represents
10,000,000 car miles of safe operation!

The improved AMCCW chilled car wheel, adopted by the AAR in 1950, continues to show greater safety when measured by the cold, hard facts — ICC safety statistics for the entire United States over a standard period of time. In the graph this performance has been shown in four-year spans, each wheel representing 10,000,000 car-miles per AMCCW wheel failure.

The record shows how AMCCW wheels have improved under all types of freight cars. On 40- and 50-ton cars, the safety performance is still better.

The improved safety record of chilled car wheels is a matter of cold statistics.

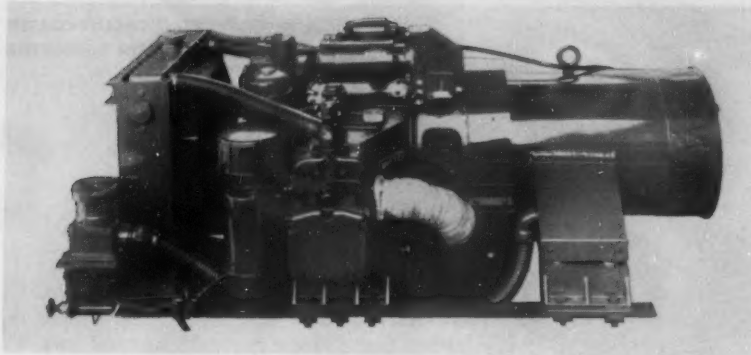
low first cost
low exchange rates
reduced inventory
short-haul delivery
increased ton mileage
high safety standards
complete AMCCW inspection
easier shop handling



**ASSOCIATION OF MANUFACTURERS
OF CHILLED CAR WHEELS**

445 North Sacramento Boulevard, Chicago 12, Illinois

Albany Car Wheel Co. • Southern Wheel (American Brake Shoe Co.)
Griffin Wheel Co. • ACF Industries • Marshall Car Wheel & Foundry Co.
Pullman-Standard Car Mfg. Co. • Canada Iron Foundries, Ltd.
Canadian Car & Foundry Co., Ltd.



Refrigerator Car Power Plant

Series "100" Witte diesel engines are now being used on mechanical refrigerator cars. These water-cooled, four-stroke cycle engines have two horizontally opposed cylinders. The balance that results from this design is intended to produce smooth operation. This design also provides a strong, box-like unit. At 1,800 rpm the "100" will produce 18 hp for continuous 24-hr-per-day operation, and a maximum of 24 hp for intermittent service.

Support pads are spaced far apart for secure mounting and stability, and are located below the crankshaft center line and close to the center of the engine mass to assure positive anchorage when subjected to severe shock. Engine speed range is 600 to 2,400 rpm, and engine displacement is 100.5 cu in. with 4-in. bore and 4-in. stroke.

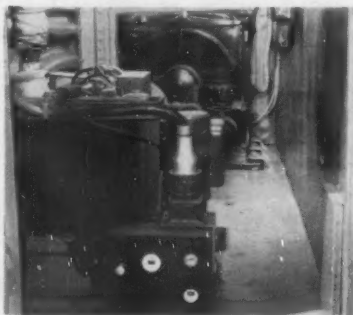
Fruit Growers Express car No. 208 had the first "100" engine installation. This car went into experimental service in June 1955, and was designed to handle fresh fruits and vegetables at controlled temperatures between 32 and 70 deg F. It has accumulated over 2,000 engine-hours handling such loads as oranges, tangerines, grapefruit and cucumbers. Fruit Growers reports that to date, its performance has been satisfactory."

Pacific Fruit Express car No. 300290 was equipped with a "100" engine in March 1956. Fitted with a Delco 12-kw alternator, the engine

powers the two 7.5-hp compressor motors of a Carrier Model 66E-3 condensing unit, a 1-hp evaporator blower motor and a 2-hp condenser motor. It was necessary to limit compressor back pressure during initial "pull down" so that the engine would not be overloaded when initially cooling the car in hot weather.

In August 1956, PFE car No. 300141 had a "100" engine installed in conjunction with a Frigidaire refrigerating system. The first of these two cars has now accumulated over 2,500 hours of service. Pacific Fruit Express has been attracted by the initial cost of the power plant, its fuel consumption rate, and its ability to use lower grade fuel oil.

Design features of the "100" engine include wet-type, replaceable cylinder liners; aluminum bearings; replaceable valve guides and inserts; and full-pressure lubrication. *Witte Engine Works, Dept. RA, Oil Well Supply Division, U. S. Steel Corporation, 1614 Oakland ave., Kansas City, Mo.* •



FRUIT GROWERS used Witte engine in fresh produce car.

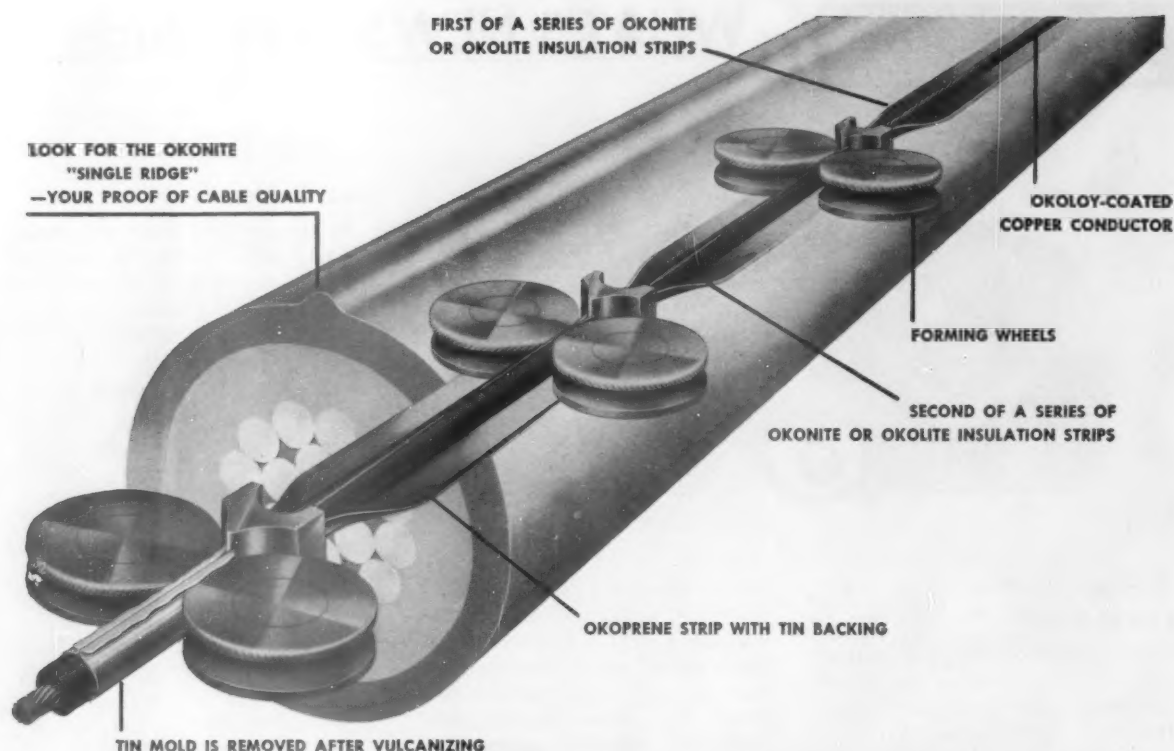
Ductile Iron

By treating gray irons with magnesium, within limits, the graphite will take the form of spheroids instead of the usual flakes. The weakening and embrittling effect of the flakes is thus removed, and a stronger, tougher, and more ductile material results. For years the gray iron foundry industry had been striving for such a castable material possessing the ductility of steel.

Ductile irons metallurgically bridge the gap between cast iron and cast steel. They have properties generally attributed to cast iron—good fluidity, castability, wear resistance and corrosion resistance. In addition there is the ease of machining, toughness, and ductility associated with steel. Ductile iron has a definite yield strength and modulus of elasticity.

Design engineers have recognized the properties of ductile iron and effected economies by specifying it in applications which previously might have required more expensive castings, weldments or forgings. To the present, more than 50 different parts have been placed in railroad service test. Most are small castings replacing either malleable iron or cast steel. One of the larger castings now in service is the ductile iron freight car center plate. Four years of non-interchange service with 2,500 of these on a western railroad is reported to have been completely satisfactory. The AAR has now authorized an interchange service test of 100 car sets.

Hunt-Spiller redesigned an aluminum diesel engine piston in ductile iron with only a three per cent increase in weight. Service tested, these pistons were found to give 33 per cent more life than the original aluminum design. A passenger car builder has redesigned the end castings for a series of cars to take advantage of the castability and strength of ductile iron. This is to save several hundred pounds per car. *Development and Research Division, International Nickel Company, Dept. RA, 67 Wall st., New York 7* •



Why the strip-insulating process assures longer cable life

As one of the oldest manufacturers of rubber-insulated cable, Okonite has made cable by all the known methods, namely the extrusion, dip and strip-insulating processes.

Long experience with these methods has convinced Okonite engineers that the strip process produces cables which are longer-lived and more reliable than those made by other methods. The following advantages explain why Okonite-Okoprene and Okolite-Okoprene cables are made by this method.

Perfectly centered conductors. The strip process is the only one that assures perfect centering of conductor. Insulation is uniform in thickness throughout cable length. There are no "thin spots."

Uniform vulcanization. Vulcanizing under pressure in a continuous metal mold makes the insulation tougher, more dense; physical and electrical characteristics are improved.

Single cure. Vulcanizing insulation and sheath in one operation is possible only with the strip process, thus avoiding shortened insulation life. Multiple vulcanization shortens the life of rubber compounds.

Strong bond. Single, simultaneous vulcanization in a metal mold under pressure insures permanent bond between insulation and sheath. This prevents "push backs" during installation, ionization at potentials above 2000 volts and water blisters in wet locations.

Quality control. Unlike any other method, the strip process permits electrical testing and visual inspection of each strip of insulating and sheathing compound both prior to and during application. These controls assure a void-free, uniform, solid dielectric wall.

Cables manufactured by this strip process have outstanding performance records. Next time you purchase cable for any circuit installation, insist on the *one* cable made by the strip-insulating process . . . specify Okonite-Okoprene or Okolite-Okoprene. For a full review of strip-insulating advantages, write for Bulletin RA-1069; The Okonite Company, Passaic, New Jersey.



OKONITE OKONITE SINCE 1878 *insulated cables*

3138

New Approach Needed For Increasing Earnings

The railroads need more money, right away. To get this additional revenue, they have pending before the ICC two proposals for increased freight rates: (1) a project by Eastern and Western railroads (with several companies abstaining) for a 15 per cent "across the board" increase; (2) a more recent proposal by the same railroads for a freight-rate increase of 7 per cent. In setting hearings on the two motions, the ICC has made all railroads respondents in the proceedings.

The recent 7 per cent proposal is intended to provide the railroads with the wherewithal to meet the general increase in wages granted to railroad employees, retroactively. Such a proposal falls into the "emergency" category since, if action is long delayed, the result will be a catastrophic decline in net railroad earnings. The project for a 15 per cent increase was intended by its proponents to increase railroad net earnings over the prevailing level. That is, it is something more than a protective measure against a disastrous decrease in earnings—which is the purpose of the 7 per cent proposal.

Poor Earnings, Inadequate Investment

The return earned by the railroads in the years 1946-1955 averaged only 3.73 per cent—which is only about half as much as is regularly earned by the regulated electric utilities; and less than a third as much as the manufacturing industry earns, on the average. Since markets for new capital are competitive, the railroads can hardly hope to raise all the investment funds they need to keep their service thoroughly adequate and modern—as long as the return they earn for their investors is so much less than investors can expect to earn by entrusting their funds to other industries. The chronic shortage of freight cars, from which both the railroads and their patrons suffer, is just one of the manifestations of the inadequacy of new investment—the direct result of chronically unsatisfactory earnings.

There is, then, no question whatever of the imperative need of the railroads—in the public interest, as well as their own—to bolster up their earnings by the amounts the 7 per cent and 15 per cent rate increases are hopefully expected to yield. The only question which arises is whether such "across the board" rate increases are fully effective in producing the increased revenue expected of them.

There are many railroad men who believe that such

increases accelerate the diversion of railroad traffic to rival agencies of transportation—and that the long-run (as contrasted with the immediate) effect of this rough-and-ready method of raising revenues is actually to reduce earnings, rather than to increase them.

Conclusive evidence is not available to prove either the error or the accuracy of this suspicion. It is the absence of comprehensive information and the consequent basing of opinions largely on estimates and "intuition"—that has led to the distressing diversity of opinion among railroad leaders on this important question. The fact remains that the railroads simply do not have comprehensive data—commodity by commodity—showing exactly how much of the present movement of traffic is by rail and how much by other forms of transportation. Neither do they have systematic information comparing (for each important movement of each important commodity) (1) present railroad rates with (2) actual cost of movement by rail and (3) probable cost to shippers of movement by rail and alternative methods.

Quick Action Imperative

If the railroads had this information, they could act with complete assurance in the emergency which now confronts them. They will not be able to act with certain assurance until they do get this information.

The immediate effect of an across-the-board increase is undoubtedly a revenue increase. Since the need is so acute for *some* increased revenues at once—a substantial "across-the-board" rise (with some hold-downs) is probably an inevitable expedient. The industry just can't afford to wait for more revenues until it can perfect and agree upon a scientific and certain method of getting them.

On the other hand, just how much longer can the industry afford still more delay in developing comprehensive information on specific traffic movements, and comparative rates and costs?

There have been experimental studies in the compilation of such data which show beyond much question that the information can be obtained in practicable and usable form. All that is necessary is to give general application to methods already pretty well tried and tested. It is a question of spending a few hundred thousand dollars in order to increase revenues, reliably, by several hundred millions.

Obtaining the revenue to meet the recent wage increases constitutes an emergency—justifying emergency methods, however risky they may be. But, for the long pull—and in order to establish rate policy, once for all, on a basis of competitive reality—systematic information is just plain indispensable. It is hard to find informed railroad people who will defend the "across-the-board" technique as an adequate device for indefinitely repeated use. And still—the development of an effective substitute is not yet being energetically pursued beyond the discussion stage.

COAL DUMPING

Wetting agent in automatic water spray dampens cargo at coal and ore piers, enabling the B&O to . . .



DUST rises in dense clouds as a car of coal is dumped without the benefit of the water spray.

Control Dust, Eliminate Hazards

Dust from coal transfer operations creates innumerable nuisance complaints and also is a hazard to workmen. The Baltimore & Ohio therefore has installed a special dust-control system at its coal and ore piers at Curtis Bay, near Baltimore, Md. Annually, its coal pier there transfers approximately 4.8 million tons of coal, mostly of fine granular size, from coal cars to scows and ocean-going vessels, and its nearby ore pier transfers about 1.5 million tons of

ore each year from ships to railroad cars.

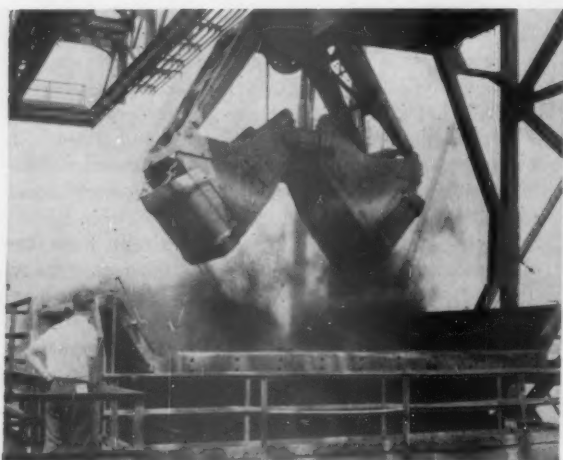
The system of dust control is simple and consists essentially of spraying the coal and ore with water while the material is being dumped. To insure complete wetting of the surfaces of the materials a wetting agent, called Compound MR, is added to the water in small amounts by proportioning equipment.

The dust-control system, engineered by the Johnson-March Corpo-

ration of Philadelphia, works automatically, starting as the material is dumped into the receiving hoppers and continuing until the entire load is thoroughly wetted. The coal or ore remains wet until it reaches its destination.

As a result of this installation, a health hazard has been eliminated, unloading and loading operations progress faster, ships and shiploads are cleaner, and the railroad has more friends in the community.

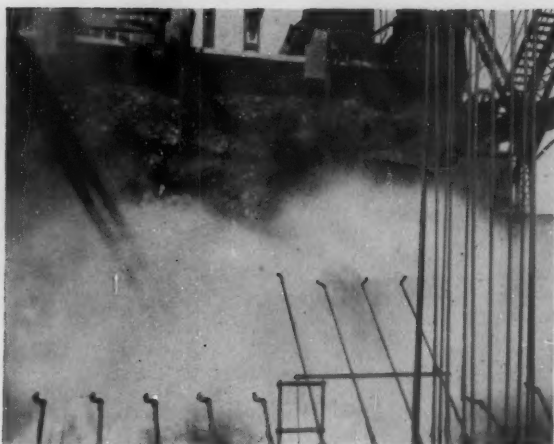
ORE LOADING



WITHOUT SPRAY, the dust completely obscures the manganese ore in the bin when the clamshell drops its load.



WITH SPRAY, the ore is wetted as it falls from the bucket so that a great deal of the dust is settled at once.

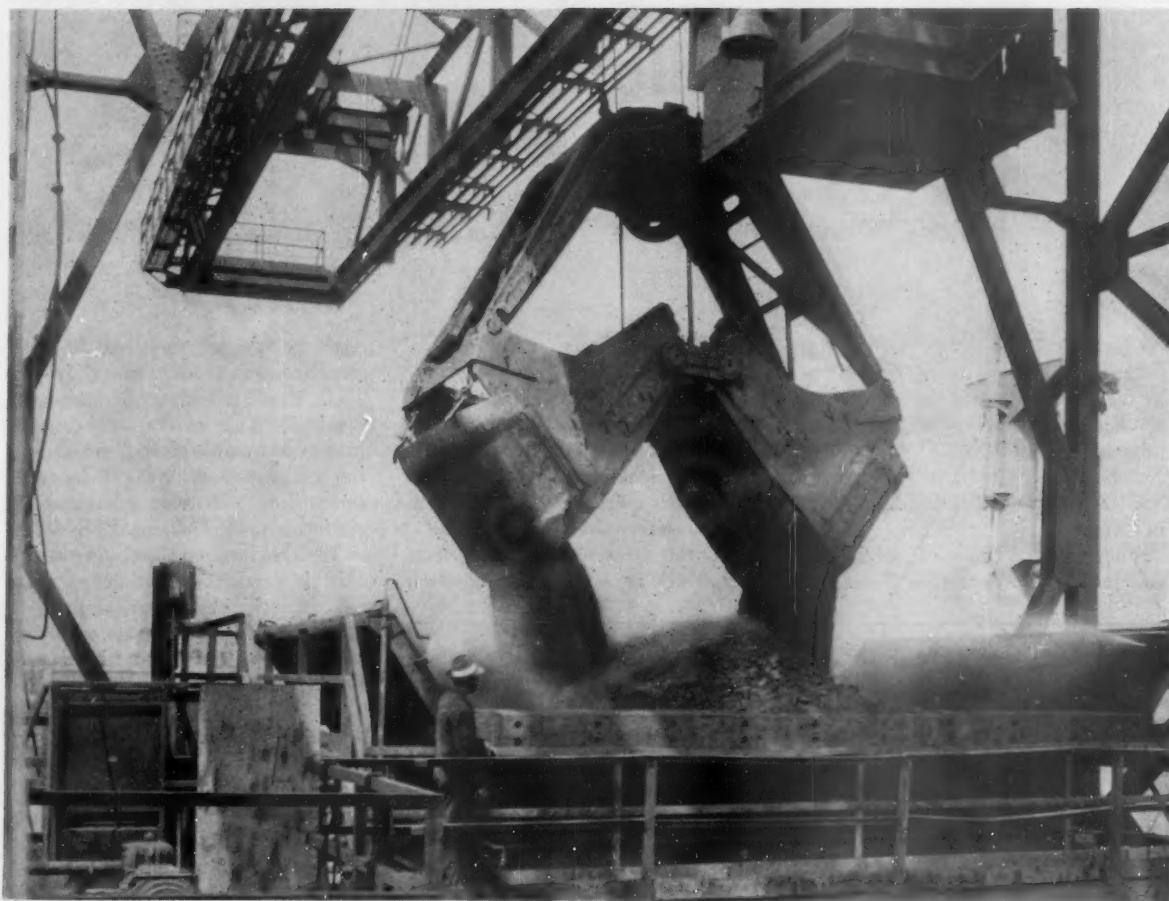


SPRAY, including a wetting agent, turns on automatically as car is dumped and continues until load is wetted.

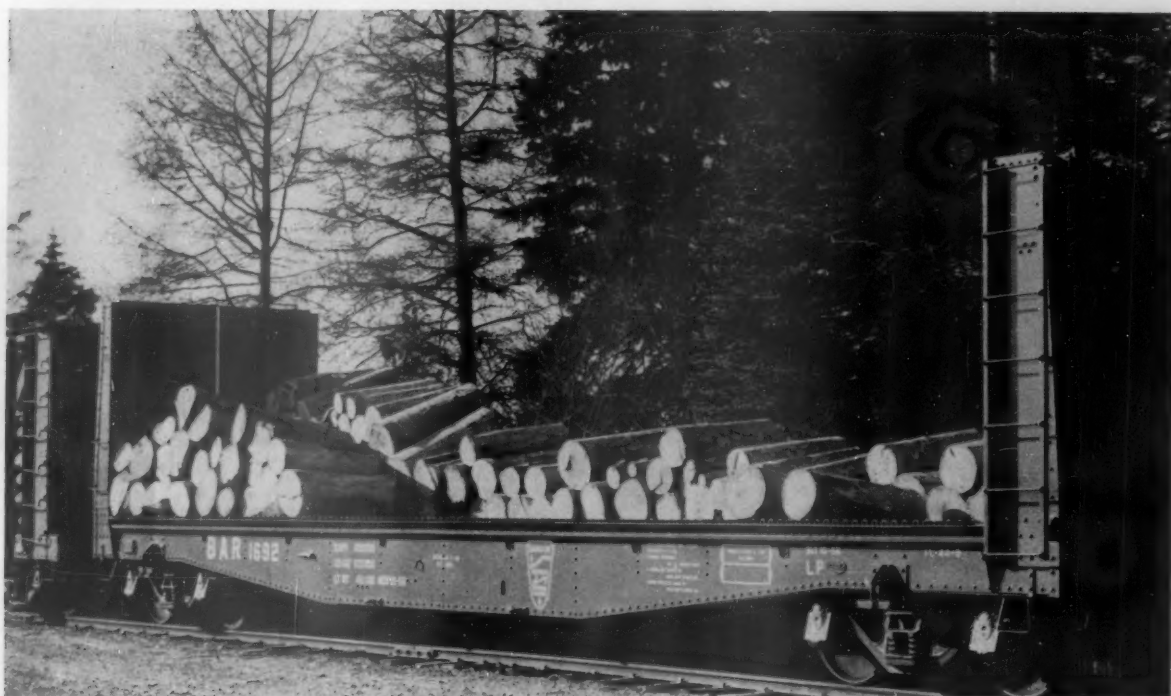


DUST-FREE air is the result of the spray blanket which smothers the dust before it rises very far.

and Make Friends



REMAINDER of dust is quickly quenched and very little escapes into the atmosphere.



Built to Cut Unloading Costs

The problem was easy all-method unloading of pulpwood cars . . . Bangor & Aroostook introduced Southern type equipment to meet the "Down Easter's" situation

Reducing the cost of unloading pulpwood was a major consideration in the design of 115 new cars purchased from the Magor Car Corporation by the Bangor & Aroostook. Nearly all were built in September, and the contract was fulfilled early in October.

These 50-ton all-steel cars with end racks are a departure from pre-

vious BAR standards in that they can be unloaded by any known method. As there is no structural interference, they are particularly suitable to car dumper operation. Where none is available, a bulldozer with a raised blade easily pushes the load off the car from either side.

All plates and shapes less than 1/4-in. thick are copper bearing steel.

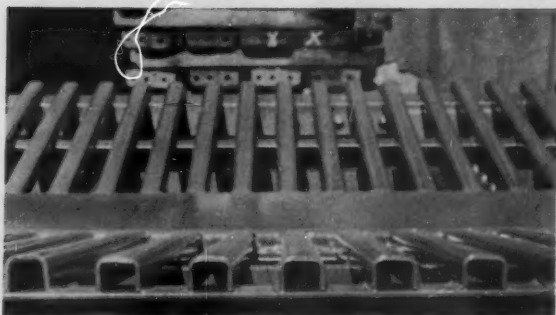
All forgings are open-hearth steel. In fabrication the car is mainly riveted. Pan head rivets are used on the inside face of the bulkheads to present a smooth surface for dumping the pulpwood. Welding incorporated into various subassemblies conforms to ASTM and AAR codes.

The cars have no sides. The entire load is carried on fish-belly center sills, continuous from striker to striker, having web plates with outside top chord angles and inside and outside bottom chord angles. The top cover plate extends the entire length and is riveted to the outside top chord angles and strikers. The fish-belly side sills are in one length from end to end and are built up of web plates and chord angles to develop the required strength.

Except over the center sill, the flooring between the bulkheads is made up of specially formed channel

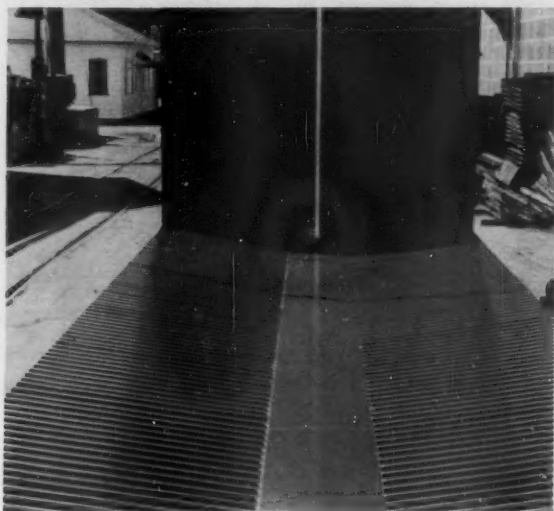
GENERAL DIMENSIONS

Length over strikers, ft-in.	48-6
Length inside end racks, ft-in.	44-0
Length between truck centers, ft-in.	37-6
Width over side sill webs, ft-in.	8-6
Width over floor bars, ft-in.	9-2
Width over anchor brackets, ft-in.	9-6
Width, center to center, of anchor bracket holes, ft-in.	9-0
Height from rail to center plate, ft-in.	2-1 1/4
Height from rail to center of coupler, ft-in.	2-10 1/2
Height from top of rail, overall, ft-in.	12-5 1/4
Estimated light weight, lb.	45,600



SIX DEGREE slope (above) levels off at 19 in. wide cover plate.

CHANNEL PIECES (below) on four in. centers prevent accumulation of water and snow.



FINAL OPERATIONS include welding the channeled flooring into position. Wooden welding forms or jigs (not shown) were used to prevent tolerance accumulation in spacing the channeled pieces.



pieces $1\frac{1}{2}$ by 2 by $\frac{1}{4}$ in. applied at right angles to the car centerline and spaced on 4-in. centers. The 6-deg inward slope of the opposing planes of the car bed is an important feature.

Not only does this help stabilize the load, but the inclined surfaces also help to carry off water that might otherwise accumulate. For additional protection, a cover plate piece $\frac{1}{4}$ in. thick and approximately 19 in. wide covers the center sill area between the bulkheads. It is supported by a bar, $\frac{3}{4}$ in. wide, skip welded to the sill cover plate.

Completing the Picture

A riveted structure of plates and rolled sections makes up the bulkheads, comprising end posts, corner posts, end plates, corner plates, and upper and lower frame stiffeners, all

permanently secured to the car. Bulkhead ends are closed by a $\frac{3}{16}$ -in. thick steel face plate attached to the inner face of the posts and connected to the floor with a rolled angle.

Safety devices, meeting ICC requirements, include all side and end ladders, grab irons, sill steps, brake step, uncoupling attachments, lettering, etc.

There are four roping staples, two to each side of the car at the bottom of the side sill near the center of the car.

The trucks are the spring-plankless, spring-plateless type with built-in snubbing devices. Symington-Gould bolsters are furnished in this group, with truck springs, side bearings, levers, and lever connections supplied by Crucible Steel, A. Stock, and Schaefer Equipment.

Commercial lubricators installed

are by Miller, O-Cel-O, and Journal Box Servicing Corp. Box lids are from Symington-Gould and the side control parts are made by American Steel Foundries.

Standard 33-in. wheels are either wrought or cast steel for $5\frac{1}{2}$ by 10-in. journals.

Miner or Cardwell-Westinghouse draft gear is employed with Symington-Gould couplers and coupler yokes.

Braking is handled with Westinghouse AB-1012's, with Wabco seal fittings employed throughout. Brake beams are by Davis Brake Beam and Creco, with shoes from American Brake Shoe.

The brake rigging supports an 80-lb cylinder pressure without exceeding AAR limits.

The cars are braked at approximately 18 per cent of the gross rail load based on a 50-lb pressure.



DISPATCHER operates selector key to remotely control wayside radio station enabling him to talk to any train on the 164-mile Danville, Ill.-Evansville, Ind. main line. This applies to unattended stations ("X" on map) and to the attended stations (circles on map) in that territory.



Trains Always in Reach Of Dispatchers' Radio

A two-year, quarter-million-dollar program for "radioizing" the Chicago & Eastern Illinois is in the "home stretch." Freight and passenger locomotives are equipped with radio, and portable packsets are carried in cabooses. By remote control of six wayside radio stations, the dispatcher at Danville, Ill., can talk to crews on trains anywhere on the 164-mile main line between Danville and Evansville, Ind. Three yards are now equipped with radio, and more installations are coming next year. C&EI radio usage includes:

- End-to-end communication on freight trains
- Train-to-wayside between trains and local operators and/or dispatchers
- Dispatcher, by remote control, to moving trains
- Yardmasters to yard and road-switch locomotives
- Trainmasters from their automobiles to trains and yard offices

Fog in the St. Louis area threatened to "blot out" switching at the C&EI's Mitchell yard recently. It was only a threat, because by using radio, switching went on without delay and cars were delivered to connections on schedule. This was one of those "unexpected" incidents which dramatically emphasize the benefits of radio communication.

Freights Get Radio. The first phase of the radio program was that of equipping freight locomotives and cabooses. The locomotives have the standard 30-watt radio sets consisting of three plug-in units (transmitter, receiver and power supply). Portable radio packsets on both cabooses and locomotives enable both head and rear brakemen to have radio with them at all times.

The next step was to provide train-to-wayside radio coverage on the main line between Danville, Ill.,

and Evansville, Ind. Of the six stations spaced along the 164 miles, three may be controlled locally (attended) and three are unattended, being remotely controlled by the dispatcher at Danville. If lines are torn down by wind or ice storms, these wayside stations "bridge" the gap.

Dispatcher 'Picks' Stations. By selective controls, including interconnections with his telephone circuit, the dispatcher can operate any of these six stations. To call a freight train crew, he operates a selector key for the wayside station nearest the train, steps on his footswitch and speaks into his microphone. His voice goes via telephone line to the wayside station where it is broadcast to the train. The engineman's answer goes via radio to the wayside station, then via telephone to dispatcher.

The dispatcher may hear all radio calls made to or from the three (at-

tended) wayside stations when they are controlled locally (that is, by the operator or yardmaster). For example, the Evansville station can be controlled by the yardmaster, or the dispatcher.

Few Stops at Interlocking. By placing a wayside radio station at the Watseka, Ill., crossing of the TP&W with the C&EI, stops have been practically eliminated for C&EI freight trains. When a freight is within 5 to 10 miles of the crossing, the engineman radios to the interlocking operator asking if the crossing will be clear when he arrives. The operator replies that it will be, or if a TP&W train is on or near the crossing, when he expects it to be in the clear. In the latter case the C&EI engineman slows down so that when he arrives at the interlocking he will have a "clear" signal.

Yards and Terminals Equipped. To improve yard opera-

tions the C&EI has installed base radio stations at Yard Center, south of Chicago, and Chicago Heights. In addition, the main-line base radio stations at Danville, Terre Haute and Evansville are used by the local yardmasters. Radio is being installed on 16 yard engines, each having a footboard control whereby a crewman standing on the footboard can talk over the locomotive radio to the yardmaster. This speaker also reproduces all radio calls received by the locomotive, thus acting as a paging speaker to call the crew foreman.

Radio equipment also has been installed in four trainmasters' automobiles and one terminal superintendent's automobile.

Thus a medium size railroad (868 miles operated) at an expenditure of a little over a quarter of a million dollars becomes "radioized" in two years. Motorola, Inc., furnished the radio equipment. Installa-



CONDUCTOR has portable radio pack-set for use in the caboose, and when he goes out on the ground to set off cars, or cut the train at a crossing.

tion was by the railroad communications department under the jurisdiction of W. N. Donahue, engineer communications and signals.

Railroading

After Hours

More Zulu Lore

W. J. Morrison, retired UP superintendent, writes from Salt Lake City—more about "zulus." In Africa, he explains, the Zulu tribes are nomads—constantly on the move with all their belongings, seeking greener pastures. So the term is most appropriate when applied to emigrant farmers.

It is nothing new for railroad men to hit upon apt terminology, especially when the official terms are long and have the flavor of gobbledegook. I knew of a more or less regular 50-mile turnaround run that was called a "yo-yo," after the top of that designation. Incidentally, nobody has yet been able to tell me where "shoo-fly" got its start.

Mr. Morrison used to make it a practice to talk to these "zulus"—back in the pre-War I days when there were a lot of them on the move. All had interesting stories to tell, all different. And Mr. Morrison said he never heard of a serious accident happening to one of them. Truck movement of emigrants may be more economical, but the "zulu" set-up certainly shows how adaptable the railroads are to almost any kind of specialized need for transportation service.

J. E. Day of Washington, D. C., tells me that the railroad telegraph-

by
James G.
Lyne



Editor,
Railway
Age

ers' symbol for a zulu was EOF. He goes on to relate some mistakes telegraphers make, because of misunderstood spacing between their dots and dashes. For example, he says he once copied "oats" for OWS (oil-well supplies).

Small World

I sat next to President H. E. Gilbert of the B of LF&E at the N. Y. Railroad Club meeting the other night, where he was the speaker of the evening. It turned out in the small talk that HEG, like myself, is a native Missourian. He started railroading on the Santa Fe, as his father did before him. He first got active in union work on the Alton—where my father worked prior to 1905 and where a late cousin of mine, Cleve Brown, was superintendent for many years.

HEG said that it was at a regional meeting of the B of LF&E in Slater, Mo., on the Alton, that Mrs. Gilbert was inducted into the ladies auxiliary of the brotherhood. HEG still con-

tinues his Missouri connections—among other means, by occasionally joining his kinfolks in keeping tabs on the duck population in the vicinity of Brookfield.

Treating Coach People Right

An active supplier—whom I do not have leave to identify, except by the initials RR—observes that coach passengers often do not get the considerate treatment that their importance from a revenue standpoint deserves.

For example, he tells of a well-known train, which handles both coach and first-class passengers—where first-class passengers are regularly admitted aboard well in advance of leaving time. But the coach passengers have to wait. RR believes the "early birds" traveling by coach ought to be allowed to get aboard and locate good seats.

He also suspects—if trainmen could be brought to realize how important their treatment of the public is to railroad success—that they would exert themselves to please more often than they do now. Commuter crews, who know their customers, usually are pretty good at this. RR particularly praises those of the Milwaukee; and he also turns in a favorable report on the crews of the Santa Fe's "El Capitan."



WINDOWS are of safety plate with no sash. Two on each side slide.



Caboose Bay Window

Increased range of vision and greater safety and comfort are characteristics of a new caboose design with a bay-window type cupola at the center of the car. The Monon has recently finished the first of eight such all-steel units. They are all-Monon in design and construction.

The caboose is essentially all-welded in construction. The center still consists of two 12-in. Z sections welded continuously. All other underframe members are welded and riveted in place. The car side, prefabricated and welded into one unit, consists of 12-gage sheets, Z-bar side posts and plates, continuous side sill angle, and a 10-in. wide 1/4-in. reinforcing plate along the top.

The four corner posts of the cupola are continuations of four of the Z-bar side posts, thus making the cupola part of the body. Four diag-

onal braces on each side at the center of the car add strength and rigidity. Two 6-in. H-beam collision posts at each end are spaced to form the door posts. The roof, consisting of 16-gage, 48- by 120-in. sheets, is all-welded.

All windows on the sides and ends of the caboose are stationary. The cupola bay extends out 9 in. on each side of car. It has two sliding windows on each side, with a fixed window at center and two stationary windows at each end. All glass is 1/4-in. safety plate, with no sash. The outside sheet of body and cupola is cut out for windows. Edge surfaces are ground smooth, and the glass set in a formed rubber seal section.

The doors are fabricated of 12-gage outside and 16-gage inside steel plates, with a fixed glass in each. A screened ventilator is provided in

each door, with a sliding cover arranged to open vertically for control of air flow.

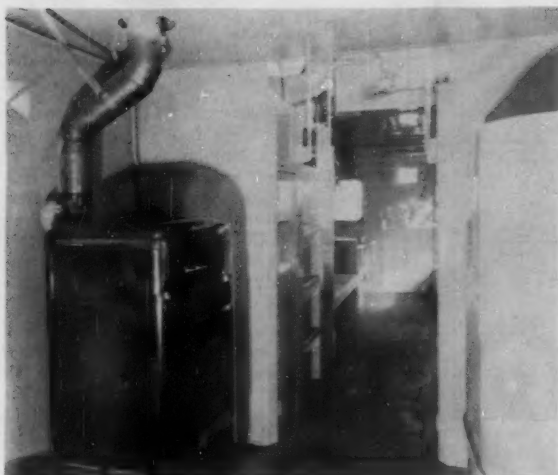
The subfloor is 2-in. yellow pine, laid transversely and supported by continuous Z-bar stringers. It is fastened by clips to side sills and stringers. Over this flooring is laid one layer of Mulehide, 1/2-in. of Celotex, another layer of Mulehide and 1 in. of yellow pine, laid lengthwise. All steps, running boards and platforms are Apex gratings. Steps to the cupola are lined with safety strip inserts.

The interior of the outside sheets of the sides, ends, roof and cupola was given one coat of Rustoleum and a 1/4-in. coat of Mortex, followed by 2 in. of Fiberglas insulation. The 16-gage inside sheets were given one coat of Rustoleum and two coats of suede gray enamel. The outside of the body gets one coat of primer, two surfacer coats and two coats of bright red enamel. The roof and underframe are painted black, lettering is white, and all safety appliances, steps and platforms are aluminum for better visibility.

The caboose has three bunks and two end seats with desks. Seat and bunk cushions are foam rubber covered with a tan fabric-backed plastic. Water is supplied by a 200-gal tank, which also has an outside access outlet for emergency use if hot boxes develop.

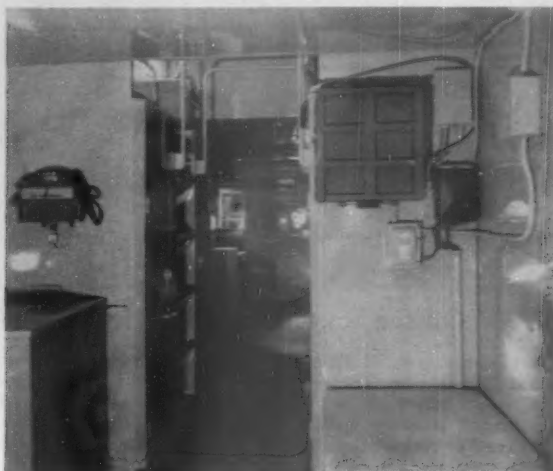
PRINCIPAL DIMENSIONS

Length inside, ft.-in.	30-0
Length over platform end sills, ft.-in.	36-7 1/4
Width inside, ft.-in.	8-8 1/4
Width over cupola bay window, ft.-in.	10-8 3/4
Width over body and roof, ft.-in.	9-2 3/4
Height inside, ft.-in.	7-0
Height, rail to top of floor, ft.-in.	3-9 3/4
Height, rail to top of cupola, ft.-in.	14-11 1/4
Length between truck centers, ft.-in.	21-6 1/2
Truck wheel base, ft.-in.	5-6
Estimated light weight, lb.	56,000



DUOTHERM SPACE heater is included and 200 gallon water tank has outside access outlet for emergency use on hot boxes.

PACK MOUNTED radio equipment and "walkie-talkie" provide quick communication.



Moves Upstairs

The car is equipped with Type E, long-shank couplers, Miner 6-in. rubber draft gears, Waughmat truck side bearings, and Ajax hand brake. The Barber-Bettendorf swing motion trucks have 5- by 9-in. journals with 33-in. cast iron wheels.

A Delco-Remy, package-unit, axle

driven alternator produces power which is converted to 12-v d-c through selenium rectifiers. It is driven by a belt arrangement. Batteries are rated at 177 amp-hr.

A Motorola railroad radio unit, consisting of rack-mounted transmitter, receiver and 12-v d-c power sup-

ply, provides communication with the head end, and there is also one "walkie-talkie" unit. The antenna is on top of the cupola.

Heating is provided by a duotherm space heater rated at 75,000 Btu and drawing its fuel from a 30-gal tank.

(Continued from page 12)

elling its rail lines in New York, New Jersey, Pennsylvania, Massachusetts, Ohio, Michigan, Indiana and Illinois. Major objectives of the Central are these:

1. To be in a position to institute in its own name an efficient daily l.c.l. service to practically all of its stations east of Buffalo, N. Y., and throughout its Michigan Central district.

2. To achieve economies inherent

in elimination of peddler car operations and in improving coordination with service being performed for it by contract truckers.

3. To expedite the handling of carload freight in local trains and to free peddler cars for the handling of carload business.

4. To provide an alternative method of handling express and other head-end traffic now handled in connection with "certain costly passenger train operations."

not based on obstructiveness. Mr. Gilbert said he feels railroads are "awakening" to opportunities to capture new freight business—though he accused some of the "biggest railroads" of running away from the passenger business.

Mr. Gilbert, calling purchasing power the measure for sharing in the rising living standard, said worker income must include a "profit" element that can be translated into savings.

Commenting that a labor leader's demands can be summed up in the word "more," Mr. Gilbert enumerated these possible areas for future bargaining with railroads:

A 32-hour week, additional health and welfare benefits, full protection for entire families with health insurance, "protection against loss of income . . . considered in terms of employer financing," annual wage programs, and supplementary pensions in addition to Railroad Retirement payments.

Gilbert Sees "Fringe Benefit" Growth

Promising cooperation to help railroads achieve economic stability, H. E. Gilbert, president of the Brotherhood of Locomotive Firemen and Enginemen, told the New York Railroad Club November 8 that railroad labor wants "no smaller share of the national economic 'pie' than is gained by other American workers."

Much of his address dealt with the improving trend in worker productivity and insisted that advanced levels of worker skill and responsibility have contributed to this as well as has the parallel improvement in equipment. He admonished railroad leaders that labor's concern with job-reducing technological advances is



P&WV Officer Takes Community Relations Post

Elected chairman of Pittsburgh Railroads Community Relations Speakers Bureau, J. A. Parsons (left), staff assistant, Pittsburgh & West Virginia, receives congratulations from representatives of participating roads. Left to right are Mr. Parsons; C. H.

Richards, transportation superintendent, Baltimore & Ohio; M. S. Smith, vice-president, Pennsylvania; R. N. Shields, president, P&WV; F. B. Okie, president, Bessemer & Lake Erie; and J. W. Barriger, president, Pittsburgh & Lake Erie.

People in the News

CURRENT HAPPENINGS AMONG Railway Officers

CANADIAN NATIONAL.—J. D. Hayes, superintendent, Toronto Terminals division, appointed senior superintendent there and H. T. Walton, acting superintendent terminals, named superintendent terminals, Toronto. F. E. Corlin, acting superintendent, Stratford, Ont., appointed superintendent there.

S. I. McLean, transportation assistant, Winnipeg, Man., appointed superintendent of transportation, Vancouver, B. C., succeeding W. S. Hewson, retired.

E. J. McInerney named superintendent of car service, Atlantic region, Moncton, N. B. L. M. Thomson appointed assistant superintendent, Port Arthur division, Sioux Lookout, Ont., succeeding T. W. Smith, promoted to superintendent, Lakehead terminals.

W. D. McPherson appointed regional employee relations officer, Winnipeg.

BANGOR & AROOSTOOK.—Paul H. Day, assistant to purchasing agent, appointed assistant purchasing agent, Derby, Me., replacing R. B. Baldwin, assigned duties in the executive department.

CANADIAN PACIFIC.—Leonard Winslade appointed assistant superintendent of motive power, Eastern region, Toronto, Ont., succeeding Peter J. Johnson, retired.

R. MacDonald, general locomotive foreman, Winnipeg, Man., promoted to division master mechanic, Brandon, Man., succeeding H. Goll, transferred to Edmonton, Alta., to replace W. J. Holloway, retired.

CHESAPEAKE & OHIO.—E. C. Jesse appointed assistant to regional manager, Northern region, Detroit. Position of assistant to general manager, Detroit, formerly held by Mr. Jesse, abolished. P. J. Koebel, assistant to division superintendent, Columbus,

Ohio, named assistant superintendent there. J. W. Shires appointed assistant terminal trainmaster, Newport News, Va. R. R. Davis named safety and fire prevention supervisor, Northern region, Grand Rapids, Mich.

Graham T. Harrison, assistant communications engineer, Richmond, Va., appointed assistant to general superintendent computer applications there.

CLINCHFIELD.—R. M. Kennedy appointed district freight agent, Charlotte, N. C., succeeding G. J. Mitchell, retired.

MINNEAPOLIS, NORTHFIELD & SOUTHERN.—M. W. Peterson appointed vice-president—traffic, Minneapolis, Minn.; M. C. Cashman, general western agent, Seattle, Wash.; D. H. Reubish, general agent, Seattle and A. H. Babich, general agent, Minneapolis.

NEW YORK CENTRAL.—Ralph J. Bruggeman appointed assistant New England freight sales manager, Boston.

SANTA FE.—Paul L. Winget appointed district freight agent, Santa Ana, Cal. William A. Cooknell succeeds Mr. Winget as assistant division freight agent, Los Angeles.

TIDEWATER SOUTHERN.—Ursul F. Bohne, traffic representative of the Western Pacific, Minneapolis, appointed general agent (traffic department) of the TS, Modesto, Calif.

OBITUARY

George J. Sirois, 56, general freight agent of the Santa Fe at Chicago, died November 6.

Financial

Chesapeake & Ohio.—*Acquisition.*—The C&O has acquired control of the Washington & Old Dominion through an exchange of 6,870 C&O common shares for all 350 outstanding capital shares of the W&OD. Walter J. Tuohy, C&O president, said the two companies will continue to operate independently of each other.

Pittsburgh & Lake Erie.—*Stock Purchase and Incentive Bonus Plans.*—Stockholders, at a special meeting in Pittsburgh October 24, approved proposals to provide stock purchase and incentive bonus plans for all employees, and a stock option plan for key executives (Railway Age, Oct. 1, p. 38).

Toledo, Peoria & Western.—*Control.*—An Interstate Commerce Commission examiner has recommended letting the Santa Fe and the Pennsylvania acquire joint and equal ownership of the TP&W. In making the recommendation, the examiner also recommended that the commission deny the application of the Minneapolis & St. Louis to acquire sole control of the TP&W, as well as proposals of the Nickel Plate and the Rock Island that they be permitted to participate in TP&W ownership.

Dividends Declared

ALABAMA GREAT SOUTHERN.—ordinary, \$4, semiannual; 6% participating preferred, \$4, semiannual; both payable December 24 to holders of record December 3.

ALBANY & VERMONT.—\$1, paid November 15 to holders of record November 1.

CHESAPEAKE & OHIO.—\$1 (increased), quarterly; payable December 20 to holders of record December 3.

CHICAGO & EASTERN ILLINOIS.—common, 25c, quarterly, payable December 27 to holders of record December 3.

CINCINNATI, NEW ORLEANS & TEXAS PACIFIC.—common, \$4, semiannual, payable December 17 to holders of record December 3; 5% preferred, \$1.25, quarterly, payable December 2 to holders of record November 15.

CLEVELAND & PITTSBURGH.—4% special guaranteed 50c, quarterly; 7% regular guaranteed, \$7½c, quarterly; both payable December 3 to holders of record November 9.

DELAWARE & BOUND BROOK.—50c, quarterly, payable November 20 to holders of record November 13.

GULF, MOBILE & OHIO.—common, 50c, quarterly; extra, 50c; both payable December 17 to holders of record November 26; \$3 preferred, \$1.25, quarterly, payable June 10, 1957, to holders of record next May 20.

MAINE CENTRAL.—3% preferred, \$5, accumulated, payable December 1 to holders of record November 16.

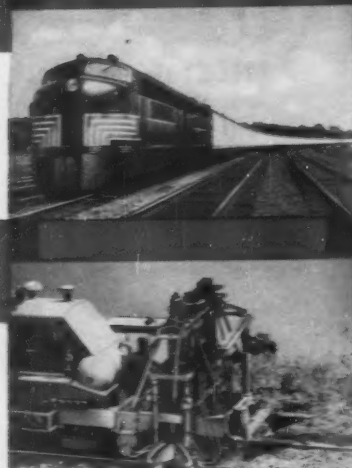
NORTH PENNSYLVANIA.—\$1, quarterly, payable November 25 to holders of record November 16.

PITTSBURGH & WEST VIRGINIA.—40c, quarterly, payable December 14 to holders of record November 19.

PITTSBURGH, YOUNGSTOWN & ASHTABULA.—7% preferred, \$1.75, quarterly, payable December 3 to holders of record November 20.

RUTLAND & WHITEHALL.—95c, paid November 15 to holders of record November 1.

VIRGINIAN.—common, increased quarterly, \$1; extra, \$1.25; both payable December 17 to holders of record December 3.



HAULING A LOAD...REPAIRING THE ROAD

ESSO DIOL RD 77—Specifically developed for the heavy-duty engines of modern locomotives, Esso Diol RD 77 assures peak efficiency and long, trouble-free engine performance—high standards that mean extra lubrication economy.

ESSOLUBE HD—For smaller, high-speed diesel engines in maintenance-of-way equipment, Essolube HD detergent-type motor oil provides dependable engine protection . . . cuts oil consumption with long-lasting lubrication.

Skilled Esso technicians are ready to analyze your petroleum needs and recommend the best fuel or lubricant for your diesel equipment. For information or technical assistance, call your local Esso office, or write: Esso Standard Oil Company, Railroad Division, 15 W. 51st Street, New York 19, N. Y.



RAILROAD PRODUCTS

RAILWAY CAR INSTITUTE

figures show that...

**87% of the
railroads scheduling delivery
of new cabooses during 1956
ordered them from
International Railway Car Co.**



INTERNATIONAL RAILWAY CAR CO.

Specialists in Cabooses

GENERAL OFFICES
BUFFALO, N. Y.

QUESTION: *What railway-type, small diesel engine should car builders buy to power mechanical reefers?*

ANSWER: *Witte's ALL-NEW diesel engine-generator unit with two horizontally-opposed cylinders for railway mechanical refrigeration service — Model 100RDA.*

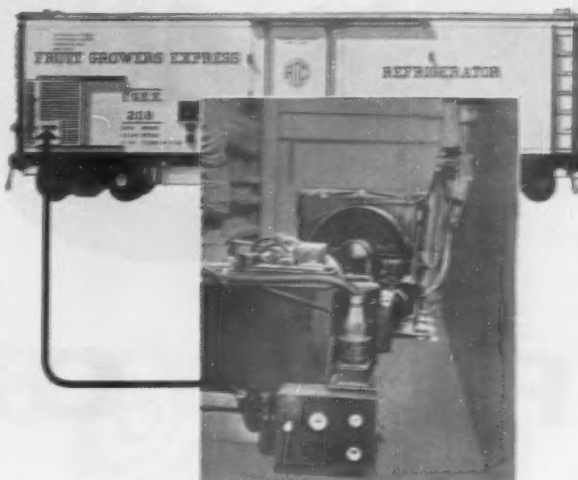
Witte's new streamlined, water-cooled Model 100RDA Diesel Engine-Generator Unit, with its two horizontally-opposed cylinders, is an accepted design for railway mechanical refrigeration.

Especially designed for severe service, the Witte 100 has a continuous rating of 18 hp (12 KW) — plus plenty of reserve power (24 hp maximum). This is adequate for cooling or heating cars up to 50' long where temperatures from -10° to 70°F have to be maintained. It is *sized-for-the-job* to give lower fuel consumption and lower maintenance cost than larger, more expensive engines.

With its horizontally-opposed cylinders, the Series 100 engine has a low center of gravity and is well-balanced and smooth running. Engine mass is concentrated on widely-spaced rubber mounting points giving positive anchorage in high-speed railway cars that are subjected to "bumping" and operational shocks.



The simple design of the Witte engine makes maintenance easy. Fuel and oil filters and controls are also readily accessible. The photograph shows a check being made on a Witte Model 100RDA driving Carrier Corporation refrigeration equipment installed in a Pacific Fruit Express Company car.



Plenty of working space in this machinery compartment due to the low height of the Witte Series 100 (25 1/4"). The engine unit is in left foreground; instrument panel is in center foreground; condensing unit is at rear center; and DRC panel is on the bulkhead wall. This installation was made in a Fruit Growers Express Company car.

The Witte Series 100 operates on regular locomotive diesel fuel, and its simple fuel system is accurately governed to give close generator regulation. The package-type injection pump (comprising governor, fuel-transfer pump and shut-down solenoid) is mounted on top of the engine. An advanced precombustion chamber design gives quick and reliable starting in hot or cold climates.

Witte... noted for long-lived, continuous-running engines... has road-tested and service-proved this railway unit in reefer applications — where only a "live" engine is an acceptable one.

WRITE FOR MORE INFORMATION ABOUT THIS NEW WITTE... fill in and mail today.

WITTE ENGINE WORKS

OIL WELL SUPPLY DIVISION UNITED STATES STEEL CORPORATION
1600 Oakland Avenue • Kansas City, Missouri

WITTE ENGINE WORKS
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1600 Oakland Avenue, Kansas City, Missouri

Gentlemen:

Tell me more about the Witte 100 Engine.

Name _____ Title _____
Company _____
Address _____

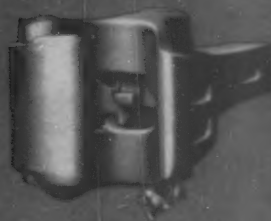
UNITED STATES STEEL



There's Improved Railroading
with National Specialties

EXAMPLE:

FRUIT GROWERS



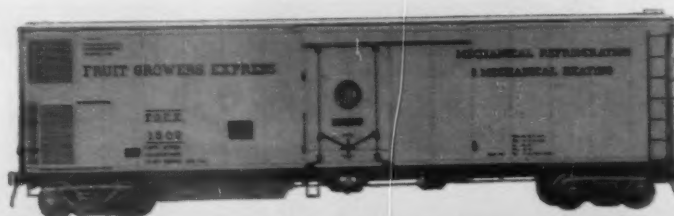
NATIONAL TYPE E
COUPLERS



NATIONAL YOKES



NATIONAL MF-400
RUBBER-CUSHIONED DRAFT GEAR





EXPRESS

The associated Companies — Fruit Growers Express, Western Fruit Express, and Burlington Refrigerator Express—have pursued a continuing program which makes their pooled fleet of refrigerator cars among the most modern in existence. The Fruit

Growers Express cars recently added to this fleet are equipped with the latest in automatic refrigeration and heating for the protection of perishable commodities...and with National Draw Gear Specialties to protect this valuable equipment.

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Railroad handling problems are many—and complex.

An ORTON Crane is built specifically for each job.

Your handling problem is our problem.

We would like to work with you. Please write, wire or phone collect.

Philo A. Orton,
President

ORTON

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CHICAGO, ILL.

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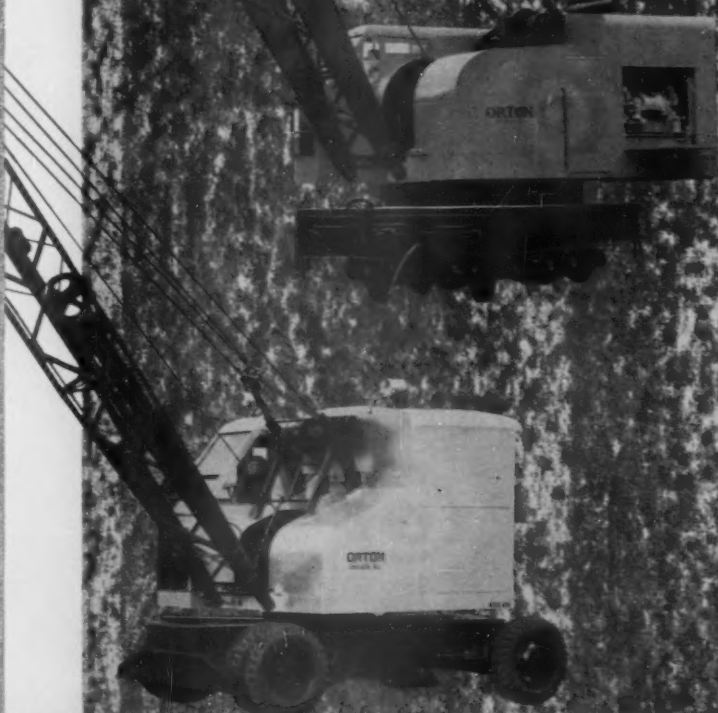
ORTON

Torque-Control

DIESEL CRANES

**For RAILROAD
HANDLING—**

**in the yard or
out on the line**



REPRESENTATIVES IN PRINCIPAL CITIES

AMERICAN BRIDGE builds new Cleveland Bridge for B&O



This new B & O Railroad bridge, recently installed over the Cuyahoga River, in Cleveland, replaces the original bridge built in 1911. Designed by Hardesty & Hanover, Consulting Engineers, New York, N. Y., the bridge consists of one single-track, single-leaf heel trunnion thru-truss bascule span, 255 feet long; one single-track thru-truss tower span for the West approach, 55 feet long; and one single-track deck plate girder span for the East approach, 63 feet long.

All steelwork for this structure was fabricated and erected by the American Bridge Division. 1,796 tons of structural steel, 166 tons of castings and 13 tons of reinforcing steel were used.

Under the terms of the contract, the responsibility of the American Bridge Division included the operator's house, machinery house, operating machinery, counterweight boxes and trusses, counterweight concrete, electrical equipment for bascule span operation, engine-generator for emergency span operation and lighting, main trunnions and bearings, counterweight trunnions and bearings, platforms, walkways and stairs, installation only of railway deck, temporary timber stringer span at east abutment, and removal of existing bridge superstructure. All in all, a large and important job, and another proof of the ability of the American Bridge Division to handle successfully and efficiently all types of bridge installation.

If you would like to know more about the bridge-building facilities of the American Bridge Division, just get in touch with our nearest office. We'll be glad to discuss your bridge requirements with you.

AMERICAN BRIDGE DIVISION, UNITED STATES STEEL CORPORATION, GENERAL OFFICES: 525 WILLIAM PENN PLACE, PITTSBURGH, PA.

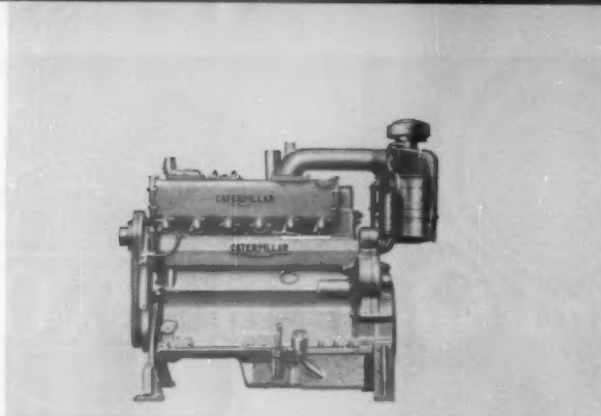
Contracting Offices in: AMBRIDGE • ATLANTA • BALTIMORE • BIRMINGHAM • BOSTON • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DENVER • DETROIT • ELMIRA • GARY • HOUSTON • LOS ANGELES • MEMPHIS • MINNEAPOLIS • NEW YORK • ORANGE, TEXAS • PHILADELPHIA • PITTSBURGH • PORTLAND, ORE. • ROANOKE • ST. LOUIS • SAN FRANCISCO • TRENTON

UNITED STATES STEEL EXPORT COMPANY, NEW YORK

AMERICAN BRIDGE



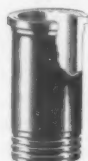
UNITED STATES STEEL



A QUARTER CENTURY OF

A CATERPILLAR FIRST
—the "Hi-Electro" hardened
cylinder liner

A CATERPILLAR FIRST
—the chemically conditioned
cylinder liner



A CATERPILLAR FIRST
—the stainless-steel piston
protector

A CATERPILLAR FIRST
—the steel-backed aluminum
bearing



A quarter of a century ago, Caterpillar created mobile diesel power. For the first time, the power of the diesel engine was unleashed from its bulky foundations and put to work in the field—compact, economical. Here was diesel power of simple design, with no need for experts to operate and maintain. Here was diesel power with the lugging ability to knuckle down to the tough jobs.

The introduction of mobile diesel power was a tremendous advance in many fields. It provided efficient diesel power for tractors, motor graders, earthmoving equipment . . . for the work boat, the gin, the locomotive, the oil rig, the municipal plant . . . for *any* application in which steady, low-cost power is crucial. And everywhere, CAT® Diesel Engines proved themselves durable and dependable. They established Caterpillar as the leader in diesel engineering.

Today, hundreds of thousands of modern heavy-duty Cat Diesels are on the job in every corner of the world. And still the research continues. Study and experiment go ahead constantly in Caterpillar laboratories. Special testing machines help point the way toward new advances. Manufacturing techniques improve, too, in the world's largest diesel engine factory—where the quality of workmanship is the standard for the industry.

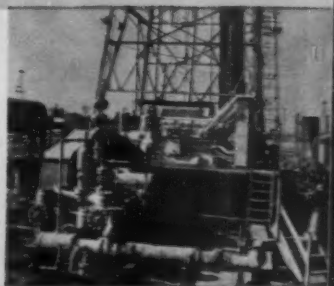
A modern world must have modern power—more and more of it. It is coming, in ever increasing quantity, from the production lines of Caterpillar, the leader.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

DIESEL POWER FOR PROGRESS



DIESEL LEADERSHIP

A CATERPILLAR FIRST

—interchangeable, adjustment-free
fuel injection equipment

A CATERPILLAR FIRST

—the capsule-type injection valve

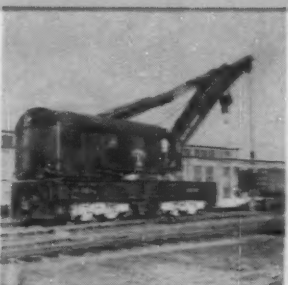
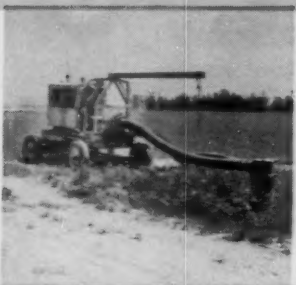
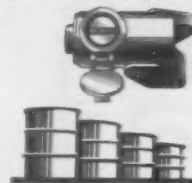


A CATERPILLAR FIRST

—the service meter

A CATERPILLAR FIRST

—superior lubricants
(detergent oils)





BALLAST CLEANING and RAIL GRINDING SERVICE

The exclusive SPENO Method of Ballast Cleaning and the SPENO Rail Grinding Train have proved themselves to be time, cost, and maintenance savers for our contractual clients.

You may contract for one or both of these services—secure that you have joined company with many other outstanding and forward looking railroads.

Write today for future availabilities of equipment.



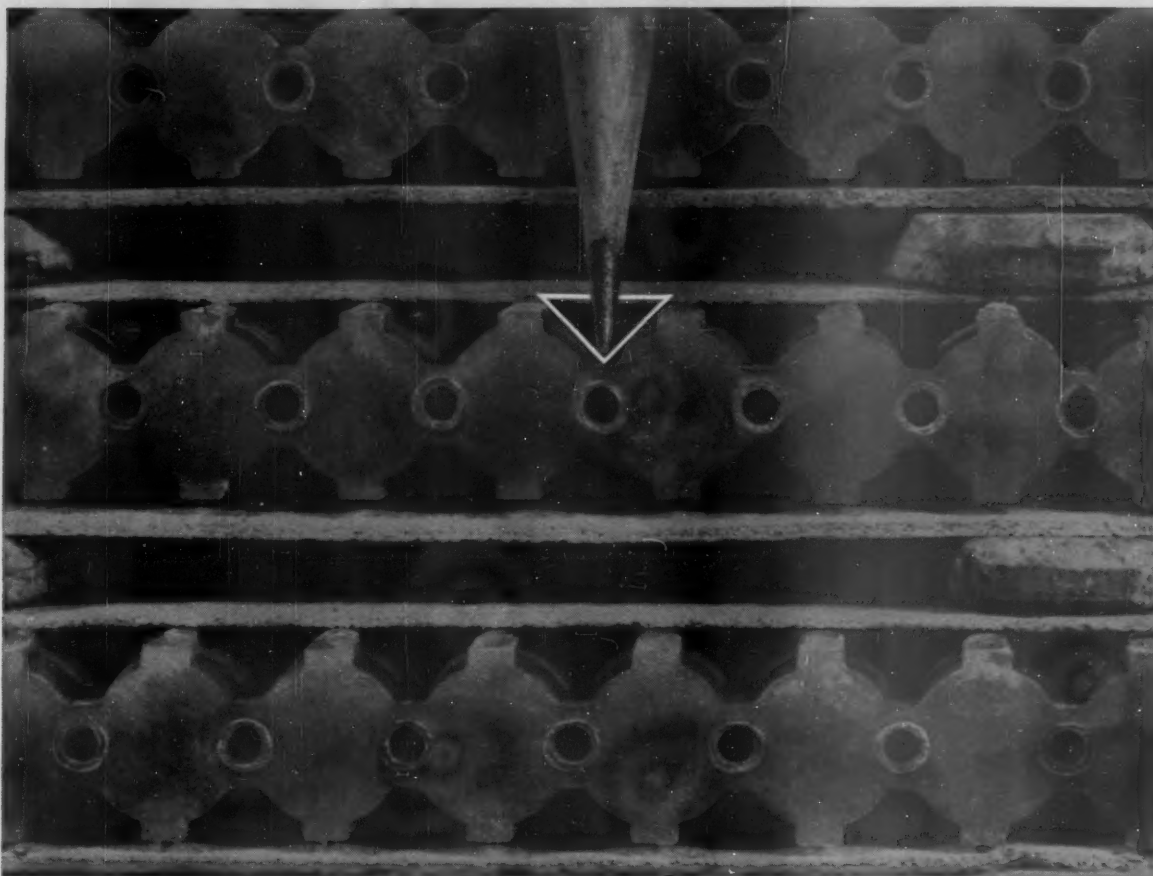
*Just Ask the Railroads
That have used us!*



FRANK SPENO RAILROAD BALLAST CLEANING CO., INC.
306 North Cayuga St., Ithaca, N. Y.

EXIDE-IRONCLAD BATTERIES

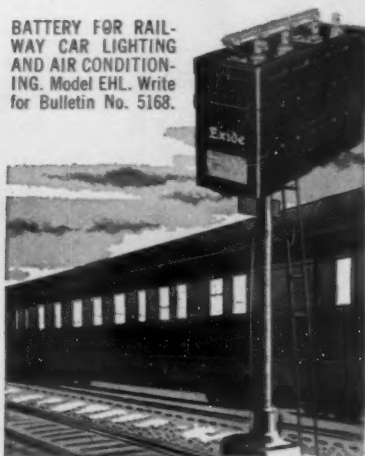
For railway car lighting and air conditioning



BOTTOM VIEW shows tubular construction of positive plates in an Exide-Ironclad Battery.

Pools of electrolyte next to plates speed heavy load response

BATTERY FOR RAILWAY CAR LIGHTING AND AIR CONDITIONING. Model EHL. Write for Bulletin No. 5168.



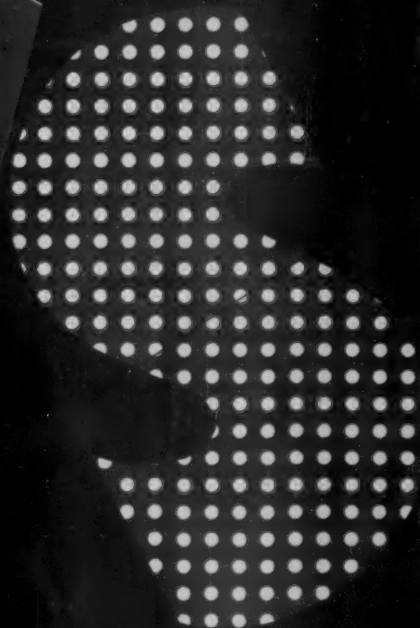
When the man at the control says "More power—fast," the positive plate in the storage battery says "More electrolyte—instantly." That's why the Exide-Ironclad Battery can meet heavy load demands so much more rapidly than other types of batteries. And it's the reason they outperform others in so many uses.

Adjacent to every positive plate in the Exide-Ironclad Battery are these triangular pools of electrolyte standing in reserve. When the call comes for power, the electrolyte is right there where it's needed for swift, sure response. There's nothing to slow down the action. Tiny slits in plastic power tubes let electrolyte in—yet prevent loss of active material.

Only the Exide-Ironclad Battery has this construction.

This exclusive feature is only one of the many reasons Exide-Ironclad Batteries have proved so superior in countless applications. When you order batteries for heavy duty service, or the equipment that requires such batteries, be sure to specify Exide-Ironclad. Write for detailed bulletin. Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.

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EXTENDED LIFE
SPRINGS ...

... COST NO MORE
THAN ORDINARY SPRINGS ...





E-X-T-E-N-D-E-D LIFE SPRINGS

*A contribution to
progress through
research by*

**AMERICAN
STEEL FOUNDRIES**

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... AND LAST MORE
THAN TWICE AS LONG

No costly maintenance problem here



For year-in, year-out durability and minimum maintenance, Olympic Portland Cement Co. selected Johns-Manville Corrugated Transite for its Bellingham, Washington, plant. Transite Erector: The E. J. Bartells Company.

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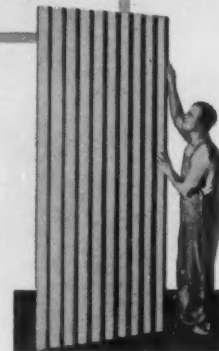
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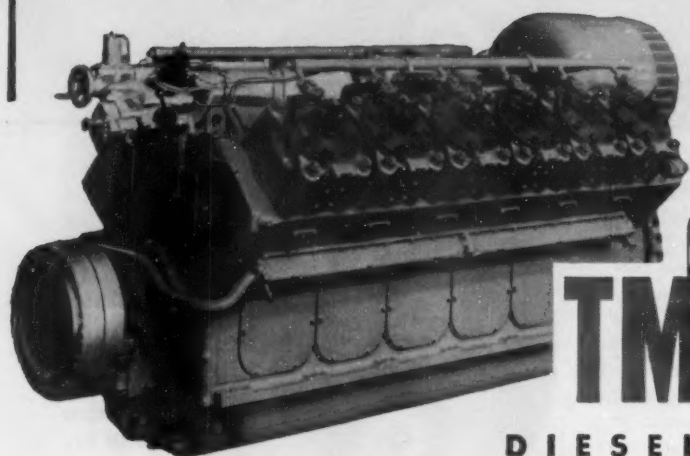
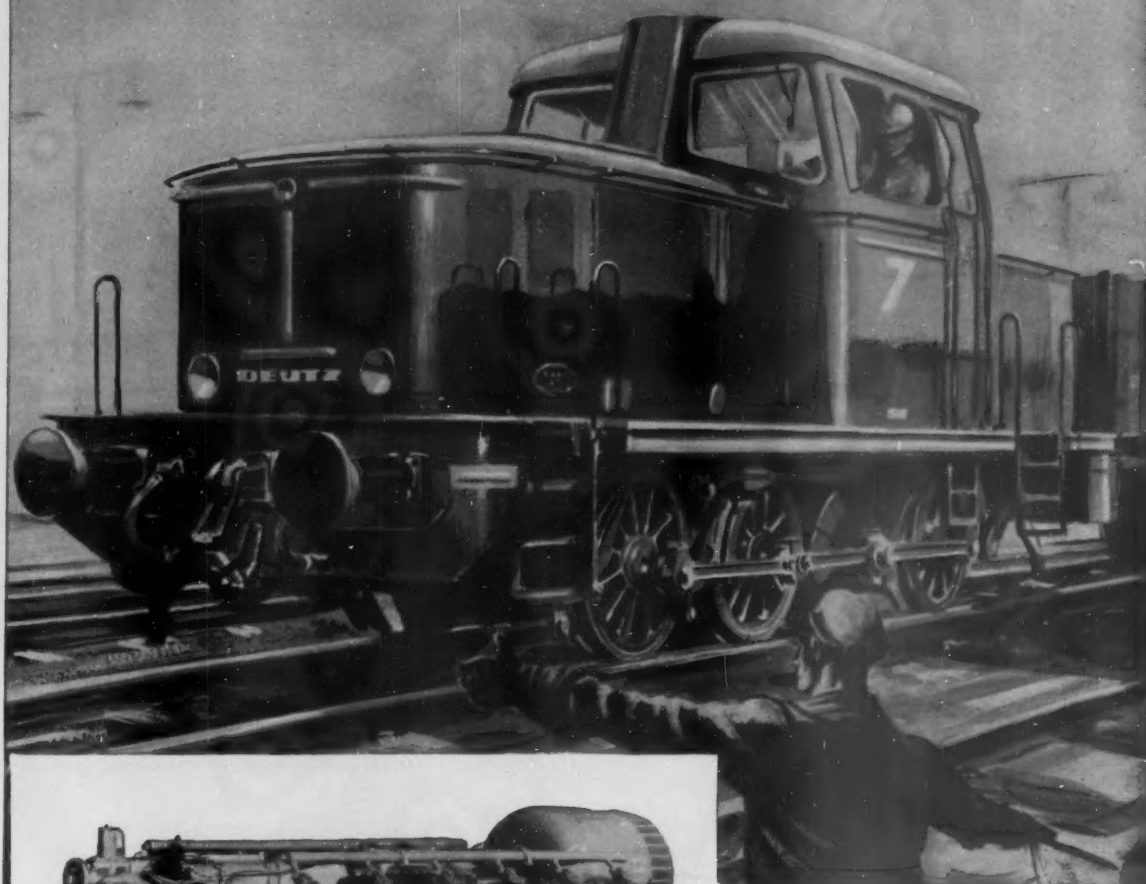


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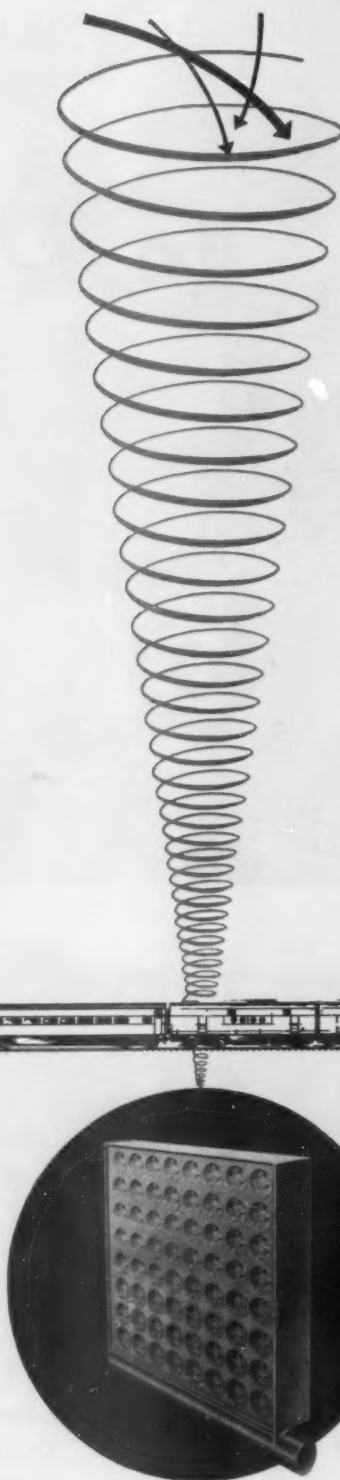
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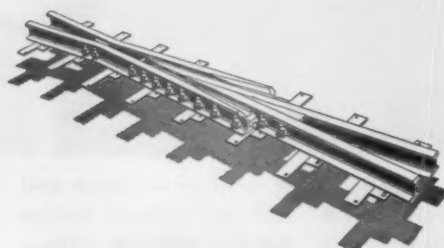
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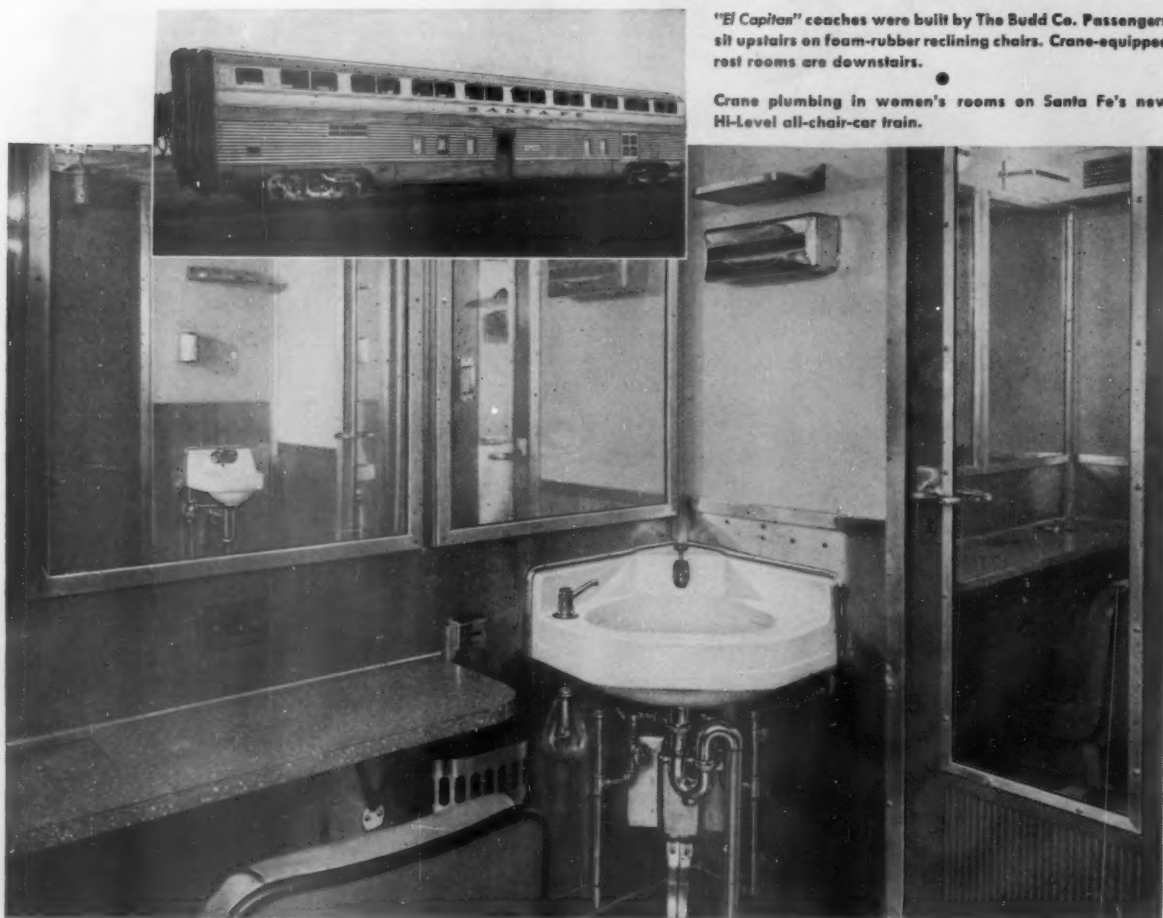
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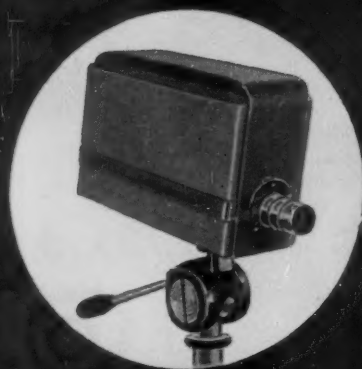
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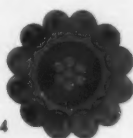
One of the great threats to the mythical Jason and the Argonauts as they sought the Golden Fleece was passage of their ship between the forbidding rock of Scylla and the whirlpool of Charybdis. With steady hands Jason guided the Argo safely through the treacherous channel. To this day, Scylla and Charybdis remain a symbol of perilous hazard.

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Overcoming the perils of Scylla and Charybdis, Jason and the Argonauts demonstrated great endurance in the face of severe destructive elements. Another—and more modern—demonstration of great endurance is Kerite Cable. Under every manner of adverse condition, throughout the world, Kerite

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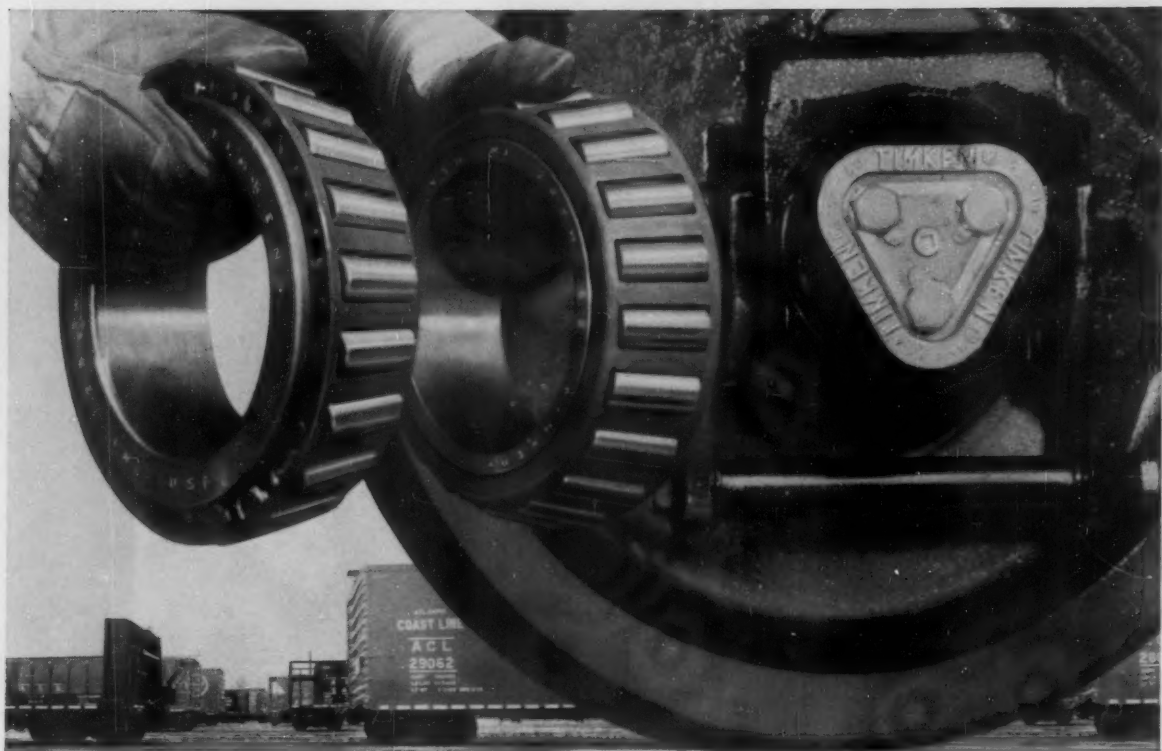
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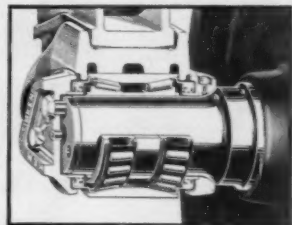
The ACL first switched 21 cars from friction bearings to Timken tapered roller bearings in 1949. Their experience in operating these cars prompted adding 925 more in 1951-52, another 2,000 in 1953. More have been added every year since. Meanwhile, every car going into ACL shops for major repairs is switched to roller bearings. With the latest order, plus conversions, ACL will have 21% of its freight car fleet rolling on roller bearings. A total of 6,707 freight cars on Timken bearings.

Timken bearings *roll* the load. They don't *slide* it. There's no metal-to-metal sliding friction. Their tapered design ends lubrication problems and the need for frequent journal box inspection. Terminal bearing inspection time

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